DEPARTMENT OF PUBLIC WORKS

ANNUAL REPORT

2008

CITY OF HARRISBURG
COMMONWEALTH OF PENNSYLVANIA

CITY OF HARRISBURG
DEPARTMENT OF PUBLIC WORKS
2008

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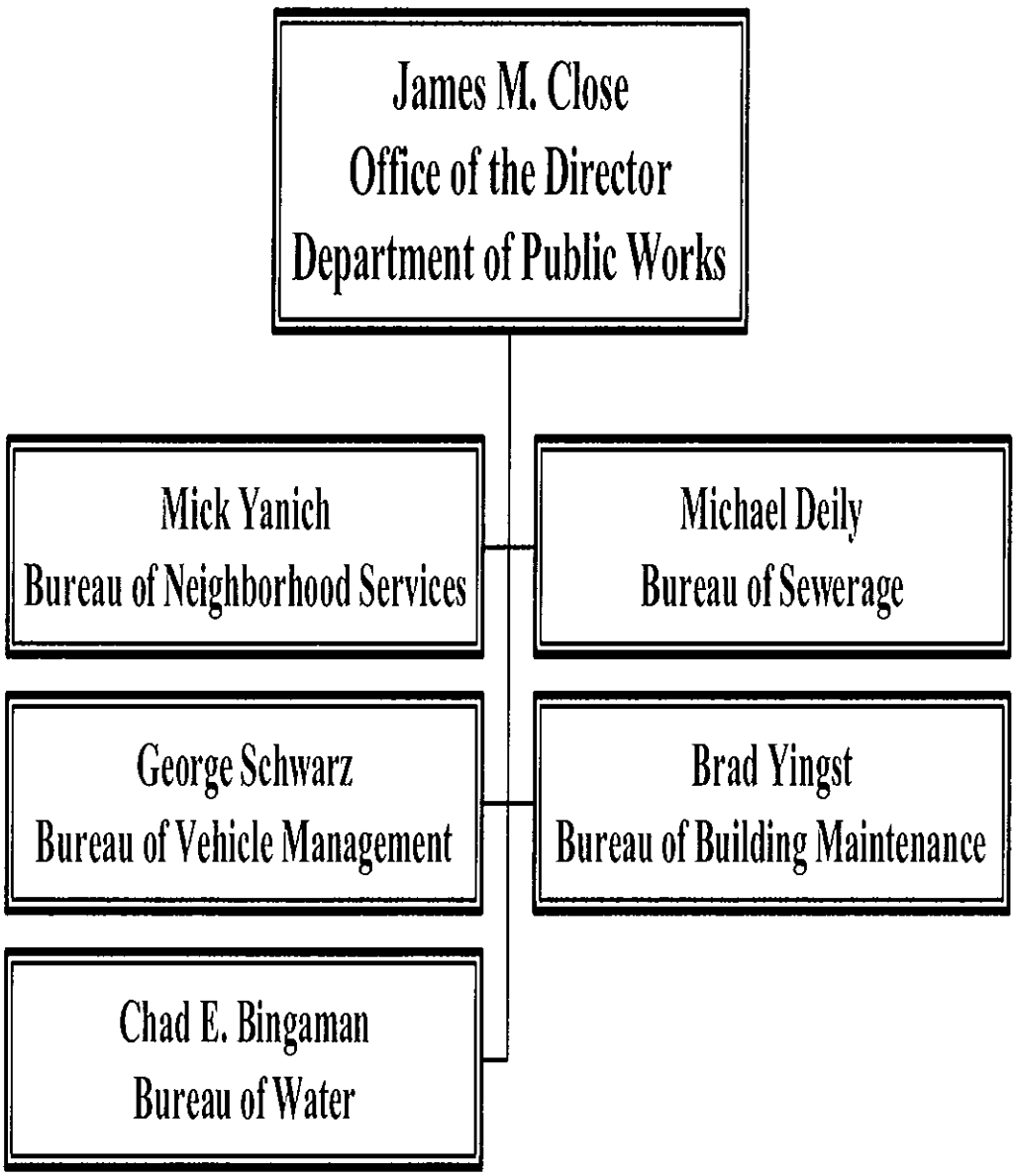
ORGANIZATIONAL CHART



BUREAU OF NEIGHBORHOOD SERVICES

MICHAEL T. YANICH – DIRECTOR
RICARDO A. DAVIS – DEPUTY DIRECTOR

BARRICADES

Barricades are distributed throughout the City for various social events and special City events. In 2008 a total of 1,515 barricades were distributed for 130 different events. The amount of barricades and events per month are listed below:

Month	Sets of Barricades	Events
January	32	3
February	61	7
March	20	3
April	35	7
May	40	9
June	118	13
July	208	15
August	244	19
September	166	14
October	104	9
November	102	7
December	105	4

BULK FOR CHARGE

In 2008 the Bureau removed bulk items from residents for a minimum charge per item. This program served a two-fold purpose. First it gave the residents a means of getting rid of unwanted bulk items and second it somewhat slowed the illegal dumping of bulk items throughout the City. $1,760.00 was collected during the year. The dollar amount of revenue produced by month is listed below:

January	$ 245.00
February	$ 85.00
March	$ 60.00
April	$ 130.00
May	$ 180.00
June	$ 150.00
July	$ 180.00
August	$ 140.00
September	$ 110.00
October	$ 140.00
November	$ 60.00
December	$ 280.00

DEMOLITION

8 properties were demolished in 2008. The Demolition crew was needed on 22 different shifts for various special assignments, such as 9 shifts for snow-fighting, 4 shifts for wind, and storm damage, and 9 shifts for leaf collection. The locations by month are listed below:

January—0

February—0

March—0

April—47 N. 14th St. (Allison Hill Automotive)

May—125 Evergreen, 110 Evergreen, 1206 Thompson

June—105 Summit, 101 Summit

July—21 & 21 ½ Evergreen

August—0

September—0

October—0

November—0

December—0

ILLEGAL BULK

Illegal Bulk items are collected throughout the year from streets, alleys, or anywhere else that people decide to dump bulk items to avoid the cost of disposing of them. A clam truck or a front end loader with 5-ton dump trucks is used to pick these items up. Total for 2008, 386.27 tons was collected in 107 work days. The following list is of the tons collected by month:

January	37.90
February	52.60
March	42.10
April	60.94
May	50.64
June	30.00
July	26.00
August	17.99
September	28.40
October	25.20
November	5.40
December	9.10

POTHOLES

Potholes are filled throughout the year in all areas of the City. Potholes are located by daily observations and phone in complaints. We assign a two-man crew with shovels, rakes, and a tamper to compact the asphalt into the holes. Potholes were filled on 63 days in 2008 using 121.90 tons of asphalt. The following list is of the days scheduled per month and tonnage of asphalt:

Month	**Days**	**Tons**
January	1	1.2
February	11	24.2
March	13	31.2
April	9	18.18
May	11	20.56
June	5	8.14
July	7	11.2
August	1	2.08
September	1	1.02
October	2	2.06
November	1	1.02
December	1	1.04

STREET CLEANING

Street cleaning is done year round and includes street sweeping, salting and plowing, and leaf removal. In 2008 277.09 tons of leaves were collected and 1,012.87 tons of street sweeping debris was collected. Eleven shifts were needed for salting and plowing to combat 8.70 inches of snow between January, February, and March. The following list is of the street sweeping debris and leaves collected in tons by month:

January	115.88 tons	37.99 tons/leaves
February	105.79 tons	0 leaves
March	80.20 tons	0 leaves
April	89.30 tons	0 leaves
May	77.10 tons	0 leaves
June	98.10 tons	0 leaves
July	87.40 tons	0 leaves
August	82.10 tons	0 leaves
September	72.40 tons	0 leaves
October	68.10 tons	32.00 tons/leaves
November	72.40 tons	144.00 tons/leaves
December	64.10 tons	63.10 tons leaves

MISCELLANEOUS

Christmas Trees

860 Christmas trees were collected from residents in January of 2008. The trees are collected by two-man crews and taken to the salt pile area at the Advanced Wastewater Treatment plant, where they get picked up for mulch by the a private company at no charge to the City.

Tire Harvest

To alleviate West Nile Virus concerns the Bureau did a tire harvest on two dates in March. The two-man crews in small dump trucks collected tires from alleys, lots, and anywhere else we could find them. We collected enough tires to fill two whole Tractor Trailers which were then driven to a recycling plant up the river in Liverpool.

Special Cleanups

Three special cleanups were performed by the Bureau in 2008. In January on the 31st, 1 man with a clam-truck collected 4.04 tons from a neighborhood cleanup by the Community Action Commission.

On June 12th we collected 5.63 tons from another cleanup by the Community Action Commission.

Finally, on August 25th in cooperation with a Dauphin County Crew we did a cleanup in the area between the Farm Show building and Norfolk Southern's Rail yard. 21.20 tons of debris was removed.

Snowstorms

In the first three months of 2008 we had to deal with 8.70 inches of snow from various storms. The largest of the storms on the 14th of February dumped 3.0 inches. In February we received 5.9 inches of snow compared with only 2.00 inches falling in the month of January. Point eight inches of snow fell on the City in March. Salt and plow trucks were busy in the street cleaning areas trying to plow back to the curb lines where no cars were parked. The very cold temperatures at night made it harder with the thaw and re-freeze every night. Over three hundred tons of salt and anti-skid material was used in the first three months of 2008.

Assist Sanitation Division

972 Sanitation slots had to be filled by City Services Division employees to complete Sanitation routes in 2008, totaling 7,776 man hours.

Leave Usage

Members of the Bureau used 9,992 hours of leave in 2008.

TELEVISED SEWERS

The Bureau televised Four Sanitary Sewers in 2008. The following list of lines televised by month.

Month	**Location**	**Cause**
January	100 Block of Radnor	Sinkhole
February	3rd-Market to Chestnut	Slip lining Sewer
March	100 Block of Balm	Sinkhole
March	3rd-Market to Chestnut	Locate Laterals

SANITARY SEWERS

The Sanitary Sewer System is checked on a daily basis to keep water flowing throughout the main lines in the system. The following list is of the manholes that needed special attention during the year either by adding chemicals to break up grease or other solids, or using a long pole to move paper back into the main flow channels:

7th and Antoine – 13 times
Hale and Rudy – 13 times
385 Yew – 13 times
2264 Kensington – 13 times
2972 Heather – 12 times
Thomas and Market – 13 times
22nd and Kensington – 14 times
Goodyear and Knox – 12 times
2737 N. 4th – 13 times
Jefferson and Woodland – 12 times
2230 Kensington – 13 times
2734 Reel – 12 times
17th and Revere – 12 times
2600 block of Green – 18 times
2500 block of Green – 17 times
2nd and Vine – 12 times
Croyden and Wyatt – 12 times
Turner and Emerald – 12 times
Hudson and Pemberton – 4 times
17th and Putnam – 9 times
17th and Boas – 3 times
900 block of Norwood – 1 time
22nd and Chestnut – 3 times
5th and Woodbine – 4 times
1100 block of Herr – 2 times
3rd and Wiconisco – 12 times
29th and Heather – 18 times
5th and Peffer – 12 times
Carey and Market – 12 times
2233 Kensington – 12 times
19th and Primrose – 12 times
20th and Derry – 12 times
2230 Green – 12 times
640 S. 25th - 12 times
5th and Antoine – 12 times
2964 Heather – 12 times
Dunkle and Derry – 13 times
Waldo and Radnor – 13 times
17th and Hunter – 10 times
Cameron and Elliot - 12 times
15th and Liberty – 10 times
19th and Mulberry – 12 times
2200 block of Swatara – 8 times
21st and Chestnut – 6 times
17th and Sumner – 2 times
700 Melrose – 3 times
15th and Bypass – 2 times
Rolleston and Pemberton – 3 times
4th and Woodbine – 3 times
2700 block of Green – 2 times

SANITARY SEWERS CLEANED BY THE VACTOR

The Following list is of the Sanitary Sewers cleaned by the Vactor in 2008 by month and location:

January – 2630 Waldo / 22nd & Kensington / 2264 Kensington

February – 20th & Paxron

March – 29th & Heather

April – 2600 Green / Yew Place / 2708 Rudy

May – 1100 Thompson / 558 Benton / 29th & Heather / Cameron & Allison

June – 1408 S. 18th/ 1000 N. 2nd / 2600 Green

July – 17th & Putnam / 2264 Kensington

August – 2600 Green / 2500 Green / 1147 Hudson

September – 3rd & Wiconisco / 29th & Heather

October – 22nd & Kensington / 3rd & Wiconisco

November – 3rd & Maclay / 28th & Market

December – 2500 Green / 29th & Heather / Croyden & Wyatt

TRASH COLLECTION

The Sanitation Division collects Trash and Recycling throughout the year. The following list is of the Trash, Recycling, and Sidewalk Receptacles emptied by tons:

Month	Trash	Recycling	Sidewalk Receptacles
January	2,496.80	131.10	5.34
February	2,218.11	123.70	5.34
March	2,374.55	124.26	5.34
April	2,736.59	138.49	5.42
May	2,759.85	138.61	5.42
June	2,467.71	125.01	5.42
July	2,664.06	127.62	5.68
August	2,244.78	125.49	5.68
September	2,459.68	125.06	5.42
October	2,498.84	126.14	5.42
November	2,308.10	123.04	5.42
December	2,428.60	124.68	5.42
Totals	**29,657.67**	**1,533.20**	**65.32**

VMC CHARGES

MONTH	FUEL	OIL	PARTS	TIRES	LABOR
January	$13,013.40	$1,010.71	$5,196.84	$2,559.18	$25,345.99
February	$15,571.25	$605.17	$7,453.95	$805.78	$13,320.91
March	$13,122.42	$1,317.71	$5,648.43	$1,864.44	$16,624.35
April	$14,836.49	$1,484.62	$11,583.13	$2,768.46	$29,271.19
May	$13,422.51	$1,566.76	$9,242.92	$1,323.12	$13,064.54
June	$15,108.59	$1,524.72	$11,296.92	$2,017.19	$14,816.82
July	$10,819.19	$1,544.52	$7,996.63	$2,017.19	$14,816.82
August	$8,226.60	$1,394.40	$11,258.99	$943.99	$12,013.88
September	$4,976.23	$1,424.97	$5,876.00	$1,001.53	$10,145.82
October	$12,041.30	$1,282.40	$9,527.45	$1,898.22	$20,988.78
November	$10,691.02	$1,755.02	$12,710.10	$3,131.09	$22,489.16
December	$9,692.07	$664.55	$3,874.26	$4,178.60	$8,209.80
GRAND TOTAL	$483,714.74				

TRAINING

The following list is of the Safety Training that the Bureau participated in during 2008:

January – None

February – None

March – None

April – None

May – None

June – None

July – None

August –None

September 30 – Hazard Communication Training – 12 City Services

October –None

November - Federally Mandated Sign Material – 4 Traffic Engineering

December -None

STORM INLETS REPAIRED

The following list is of the Storm Inlets that were repaired throughout the year:

January – Cameron & Cumberland, Parkway & Briggs, 19th & Brookwood

April – 7th & Ross, 7th & Seneca, Fulton & Peffer, 3rd & Radnor, 21st & Zarker

May – 2nd & Manor, 3rd & Lewis, 3rd & Emerald, 4th & Verbeke, Linden & Chestnut

June – 3rd & Muench, 15th & Mayflower, 7th & Peffer, Penn & Verbeke

October – 7th & Curtin, 16th & Briggs

STORM INLETS CLEANED BY VACTOR

The following is a list of storm inlets cleaned by the Vactor in 2008:

January – 3rd & Market (SW & NW), Green & Division (SE), State & Lynn (NE),

2nd & Graham (NW), Reese & Evergreen (NE & NW), Kittatinny & Evergreen (SE)

February – None

March – None

April – 7th & Ross (SW), 3rd & Radnor (NE), Parkway & Briggs (SW), 21st &Zarker (NE)

19th & Brookwood (SE), Peffer & Fulton (SE), 7th & Seneca (SW)

May – Linden & Chestnut (NE), 3rd & Lewis (SW), 3rd & Emerald (SW), 2nd & Manor (SE)

June – 4th & Verbeke (NW), 3rd & Muench (NW), 15th & Mayflower (SW)

July – Reel & Lexington (SW), 4th & Woodbine (SE),7th & Peffer (SW), 3rd & Kelker (NE)

August – 19th & Zarker (SW), Green & Parkside Lane (NW)

September – 1720 Berryhill (FRONT), 17th & Primrose (NE), 21st & Parkhill (SW)

October – 15th & Berryhill (NE), 4th & Woodbine (SW), 5th & Seneca (SE)

November – None

December – None

SINKHOLES

The following list is of the Sinkholes repaired in 2008 and the materials needed to restore the road surfaces:

Month	Location	Tons of Stone	Tons of Asphalt
January	200 Block of Market	16.14	3.46
	1720 Berryhill	8.08	2.54
	James and Herr	9.05	1.48
May	100 Block of Radnor	186.63	32.04
September	14th & Shoop	16.40	8.14
	268 Boas	14.80	8.02
	148 Sylvan Terrace	22.08	10.14
October	13th & Vernon	16.08	1.97
	North & Susquehanna	14.80	8.02
	18th & Holly	19.58	9.12
	Waldo & Division	4.24	2.01
December	Willow & Liberty	6.40	1.98

MANHOLE CASINGS

One Manhole casing and lid was replaced in 2008 on the 30th of July on Cameron Street and Jonestown Road in front of Don's Towing.

EMPLOYEE ROSTER

Akra, Daniel
Aviles, Mariano
Bonnell, Ronald
Bradley, George
Caraballo, Miguel
Chacon, Hector
Colon, Luis
Crosson, Joseph
Diaz, Richard
Doutrich, Tim
Fox, Michael
George, Herbert
Gingrich, William
Hernandez, Carlos
Hildum, James
Kazhdan, Yevgeniy
Keller, Rodney
Marcucci, Daniel
McDonald, Lawrence
Nye, Michael
Pacheco, Jose
Robinson, James
Ross, Gary
Roy, Clarence
Saunders, Al
Saunders, Randy
Shatto, Paul
Sowers, Harry
Spiroff, David
Stimeling, William
Taylor, Edward
Thompson, Del
Vargo, Alan
Washington, Darryl
Washington, Michael
Watlington, Daniel
West, David
Zellers, Eric
Zenon, Ramon

TRAFFIC DIVISION

No	Parks And Recreation	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	River Front Park (Hrs.)												2	2
2	City Island (Hrs.)	2	1	118	285	50	13	31	10		2	20	56	588
3	Reservoir Park (Hrs.)						12	5		1			2	20
4	Walnut Street Bridge (Hrs.)			48	103			2		40				193
5	Banner Installation / Removal (Hrs.)			103						21		24	4	152
6	Accent / Tree Lighting (Hrs.)													0
7	Christmas Decorations (Hrs.)	41		30							29	409	47	556
8	Miscellaneous (Hrs.)		2											2
9	Sunken Gardens / Italian Lake (Hrs.)						4							4
10	Pool # 1 & 2 (Hrs.)					4	22							26
11	Various Parks (Hrs.)									4				4
12	Special Events (Hrs.)	18			1	111	39	241	217	113	5	4	37	786

No	Traffic Pavement Markings-Inlaid	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	Stop Bars (LF)													0
2	Lain Arrows (EA.)													0
3	Crosswalks (LF)													0
4	Long Line (LF)													0

No	Traffic Pavement Markings-Thermoplastic	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	Stop Bars (LF) 12"													0
2	Stop Bars (LF) 24"						110		270					380
3	Lane Arrows (LF)						4		2					6
4	Crosswalks (LF) 6"													0
5	Crosswalks (LF) 8"						360		250					610
6	Long Line (LF)													0
7	Pavement Marking (Hrs)						88		105					193

TRAFFIC DIVISION

No	Traffic Pavement Markings-Paint	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	Parking Stalls (LF)													0

No	Miscellaneous Dept. Assistance	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	City Services (Hrs.)	104					2				2			108
2	VMC (Hrs.)													0
3	Sanitation (Hrs.)													0
4	Water (Hrs.)													0
5	Sewerage (Hrs.)													0
6	City Hall Building Maintenance (Hrs.)					3	1							4
7	Data Processing/Wireless Comm. (Hrs)	2												2
8	Comm. Center Alarm System (Hrs.)									1	1	1	1	4
9	Police Bureau (Hrs.)									0				0
10	Fire Bureau (Hrs.)													0
11	Fire Museum (Hrs.)													0
12	National Civil War Museum (Hrs.)													0
13	Engineering (Hrs.)													0
14	Directional Signs (Hrs.)	14				8								22
15	Parking Authority (Hrs.)													0
16	Special Project Signs (Hrs.)													0
17	Flood Prep/Damage (Hrs.)													0

TRAFFIC DIVISION

No	Type of Signs Replaced / Installed	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	3-Way/4-Way Signs											1		1
2	Adopt-A-Block Signs (Lot)				4									4
3	All Traffic Must Turn Right/Left				1									1
4	Arrow Signs		15	8	9	12	4	26	1		1			76
5	Crime Watch Signs			1										1
6	Do Not Enter Signs	1		5			1	2			1			10
7	Drug Signs													0
8	Fine Signs for H/P Signs	10	11	2	6	11	19	3	7	3	24		7	103
9	Handicap Parking Signs	20	33	4	7	26	41	7	13	6	49		13	219
10	Keep Right/Left Signs													0
11	Loading Zone Signs		2	1	2			2						7
12	Miscellaneous Signs			1			3	5		10	2			21
13	N.C.W.M. Signs													0
14	No Outlet Signs								1					1
15	No Parking Any Time Signs	2	10	7	10	12	9	25	2				1	78
16	No Right/Left Turn Signs			1										1
17	No Turn Signs		2											2
18	No U-Turn Signs													0
19	One Way Signs	4	4	4	3	7	1	7	2	6	3	4	1	46
20	Ped Signs													0
21	Permit Parking Signs							2						2
22	Playground Signs							1						1
23	Right/Left Lane Must Turn Signs						1							1
24	School Crossing Signs				1									1
25	School Signs												2	2
26	Signs for AWTF													0
27	Signs for City Hall													0
28	Signs for Parks & Rec.													0
29	Signs for Police / Fire													0
30	Signs for Public Works													0
31	Signs for Steam Plant													0
32	Signs for Water Dept													0
33	Slow Signs													0
34	Snow Emergency Signs			4				1	1					6
35	Special Projects Signs													0
36	Speed Limit Signs													0
37	Stop / Signal Ahead Signs									2	1			3
38	Stop Signs	3	13		2	8	6	16	1	4	4	2	3	62
39	Street Cleaning Signs	6	1		73	42	8	40	18		12			200
40	Street Name Signs	32	40	9	4		8		20		8			121
41	Tow-Away-Zone Signs													0
42	Truck Signs													0
43	Watch Children Signs		1	1	1	1	1	3					4	12
44	Way Finder Signs													0
45	Yield Signs			3										3

TRAFFIC DIVISION

No	Office/Other	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	Administrative Division (Hrs.)	30	9	7	6	17	10	8	9	9	29	19	8	161
2	Shop Work (Hrs.)	28	38	53	10	16	10	12	12	2	7	4	41	233
3	Install & Repair Radios (Hrs.)	1				1	5			7	1		11	26
4	PA-One-Call Locates (Hrs.)	33	17	7	17	27	20	28	18	39	21	11	18	256
5	Vehicle Preventive Maintenance (Hrs.)													0
6	Building Maintenance (Hrs.)													0
7	Snow Removal (Hrs.)		69											69
8	Public Works Misc. (Hrs.)	16	3	7		4	9	7		32	6	5	25	114
9	Safety Committee (Hrs.)													0
10	HTC Lighting (Hrs)		5						6					11

No	Traffic Signals	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	Emergency Call Outs	2	2	2	5	7	5	2	4	1	4	3	5	42
2	Preventive Maintenance/Relamp (Hrs.)									106	191			297
3	Lamp Replacements (Hrs.)				1	2	4	6						13
4	Street Repairs (Hrs.)	12	37	23	27	67	84	80	154	133	173	117	230	1137
5	Cable Troubleshooting (Hrs.)										1			1
6	Bench Repairs (Hrs.)	15	40	16	17	19	2	5	5	3	5	2	9	138
7	Signal Programming (Hrs.)	79	3	20			3	2		6	12	4		129
8	Signal Design/Inspection/Contr. (Hrs.)		3			11	30	22	7	3	1			77
9	Miscellaneous (Hrs.)	1	3	8	2	12	2	4	4			5		41
10	L. E. D. Installation (Hrs.)						24	59						83
11	PPL Attachment Maps (Hrs)													0

No	Signs	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	Fabricated	57	181	98	25	87	119	108	93	69	22		1	860
2	Repaired	37	30	17	30	25	21	13	15	14	12		8	222
3	Installed	44	33	19	82	50	66	26	35	24	45	4	15	443
4	Replaced	49	55	57	42	70	44	104	34	7	61	3	19	545
5	Removed	44	34	14	66	29	35	8	14	6	56		13	319
6	Poles Used	25	37	8	18	24	32	7	22	20	27	2	11	233
7	R&R of Sign Areas (Hrs.)	63	75	39	26	84	19	70	27					403

2008 Budget

0162 City Services

Personnel Services	$1,359,774.00
Operating Expenses	$458,855.00
Capital Outlay	$61,639.00
Total	**$1,880,268.00**

2020 State Liquid Fuels

Personnel Services	$0.00
Operating Expenses	$844,575.00
Capital Outlay	$0.00
Transfers	$64,672.00
Total	**$909,247.00**

2710 Sanitation

Personnel Services	$1,299,110.00
Operating Expenses	$1,357,410.00
Capital Outlay	$233,190.00
Transfers	$1,489,381.00
Non-Expenditure Items	$21,809.00
Total	**$4,400,900.00**

BUREAU OF BUILDING MAINTENANCE

BRADLEY A. YINGST – DIRECTOR

ACCOMPLISHMENT REPORT

2008

GENERAL

The Bureau of Building Maintenance consists of a Bureau Director, four custodians, and three duplication staff. Duties for employees of building maintenance are as follows:

- Two custodians servicing the Public Safety Building.
- Two custodians servicing the City Government Building.

Two major duties each day, completed by five persons is:

- The cleaning of 29 restrooms.
- The emptying of 406 trash cans.

1. The 29 rest rooms contain the following:

Toilets	29	Towel Dispensers	29
Toilet Cubicles	49	Paper Holders	49
Urinals	24	Soap Machines	29
Wash Basins	43	Ash Trays	29
Mirrors	43	Ceiling Vents	29

The total floor area to mop is 3,066 square feet, an area 10 feet wide by 306 feet long, or roughly the length of River Alley from PNI to Walnut Street.

All these items are checked, cleaned and serviced once daily.

2. The 406 trashcans can be related to as 30 trips to the trash room.

Nineteen of those trips are from a distance of 1/2 block away.
Time must also be used to clean up the trash collection and staging areas.

One half hour has been given to clean each rest room. This means there are 14.50 hours per day used to clean rest rooms.

ADDITIONAL DAILY DUTIES

- The cleaning of 7 drinking water fountains.
- Dumping and wiping-out an estimated 200 ashtrays.
- The cleaning of 4 office suite directories.
- The cleaning of 4 fire hose cabinets in the Public Safety Building.
- The cleaning of 5 glass doors in the Public Safety lobby.
- The cleaning of 2 information windows in the Public Safety lobby.
- The cleaning of 1 glass display case in the Public Safety lobby.
- The dumping and cleaning of 5 ashtray stands in the Public Safety Building.

WEEKLY DUTIES

- Sweep and mop 401 stair treads.
- Sweep an area of 4,742 square feet.
- Sweep and mop an area of 26,205 square feet, or an area equal to 60% of one acre. That is 3,945 feet more than the total space on which the Public Safety Building is constructed.
- Vacuum an area of 76,019 square feet, or an area equal to 1 3/4 acres.
- Clean and polish 22 elevator doors.
- Clean 8 shower stalls.
- Clean one 10-space shower stall and a drying off room.
- Clean a number of lock-up cells as needed.
- Replace 30 to 40 light tubes.
- Deliver and organize an inestimable amount of boxes.
- Rearrange and organize an inestimable amount of storage material and furniture.
- Decorate, tear down and organize at least one special event during the summer months.
- Run performance tests on emergency generators (three) each week.

MONTHLY DUTIES

- A floor area of 4,900 square feet is waxed.
- A floor area of 41,664 square feet, or 95% of an acre, is swept.
- 157 lockers are dusted and wiped down.
- An estimated 25 ceiling lights are cleaned.

DAILY DUTIES – SECOND SHIFT

- Lock-up both buildings. This task includes 49 doors.
- Dump and clean 14 ashtray stands.
- Clean 10 glass doors.
- Vacuum council chambers and caucus room, a total of 1,716 square feet.
- Dust and polish council desks and tables (10).
- Dust off and check council seating, a total of 94 theater-arranged seats.
- Empty the trash in the mayor's suite. (7 cans).

- Clean two rest rooms containing the following

  Two toilets
  Four washbasins
  Four mirrors
  One urinal
  Two toilet cubicles
  Two ceiling vents
  Two toilet paper holders
  Two soap machines
  Two towel dispensers
  Mopping two floors equaling 224 square feet

In addition to the normal cleaning activities of the bureau, staff also repainted the 3rd floor lobby of the McCormick Public Safety Building; obtained and furnished a suite for the Susquehanna River celebration; provided year long clerical support to the City Treasurer; pulled 1,000 feet of computer cable for the Deputy Business Administrator, Parks & Recreation and Mayor's Office of Economic Development; repainted 2 offices for Parks & Recreation; repainted the Director of Planning office; moved Parks & Recreation staff from the Mayor's Office of Economic to private offices; and relined parking spaces on both levels of the McCormick Public Safety parking garage.

Duties of the duplication staff include the printing and binding of forms and booklets, folding and inserting of monthly utility bills with/without inserts, sorting and distribution of all incoming mail, preparation of all outgoing mail, and serves as the central source of all paper and office supplies.

During 2008, three duplication staff folded, inserted and mailed 183,394 utility bills, processed 142,335 pieces of outgoing mail and performed 658 printing jobs comprising 1,142,386 copies. An unknown but significant volume of internal interoffice mail was also handled.

BUREAU OF BUILDING MAINTENANCE

2008 PERSONNEL

Management Staff	Position	Employment Date
Bradley A. Yingst	Director	02-06-96
Duplication Center		
Robin Grannison	Central Support Assistant II	9/26/1983
Steven McCutcheon	Reproduction Tech II	2/06/1989
John Watson	Clerk II	4/19/1979
Maintenance		
John Goodrich	Laborer II	7/30/1979
Ngoan Le	Laborer II	11/25/1991
Wayne Pittman	Laborer II	10/15/1974
Curtis Shover	Laborer II	4/09/1986

BUREAU OF VEHICLE MANAGEMENT

GEORGE L. SCHWARTZ – DIRECTOR

HISTORICAL INFORMATION

The first known "Vehicle Repair Facility", for the City, was located in close proximity to the "Farm Show Complex" on North Cameron Street. Housing either three or four mechanics the primary responsibility was to maintain and repair approximately twelve sanitation packers. The "Lead Mechanic's name was Mr. Cassell.

In the early 1970's, the now known "Public Works Complex", was built. The enclosed area, with an address of 1690 South 19th Street, was built to garage equipment for the Sanitation and Incinerator Bureaus but was quickly converted to accommodate the three automotive technicians from the North Cameron Street location. The complex would later be expanded to additionally facilitate the Bureaus' of City Services, Traffic Engineering, Shade Tree and Water. While some of these Offices and operations have since been relocated elsewhere in the City, or reorganized / consolidated and operated under the name of Bureau of Neighborhood Services, the Vehicle Maintenance Center remains at this location.

The complement of automotive technicians that were relocated to this location would rapidly increase in number. This increase in the number of employees prompted the additional responsibility of maintaining more of the City's vehicles and equipment. At one time the Bureau's organization included twenty-three employees, not including a management staff of two. The organization was then comprised of; a body shop with two employees, a refueling site with an employee to dispense fuel and wash vehicles, three custodians to care for the facility / grounds, two parts persons, three administrative / clerical staff and about twelve mechanics to maintain the fleet of unknown size (estimated at two hundred and fifty pieces). The management staff included a Bureau Director, Mr. Eugene Durham, and a Chief of Operations, Mr. Roger Roden. The Bureau was then known as the Bureau of Vehicle Maintenance. The total complement of employees peeked at about twenty-five in mid to late 1970's.

In 1989, the City's fleet was comprised of approximately two hundred and seventy seven known pieces of equipment. The Bureau had an employee complement, at that time, of sixteen. The Bureau's organization included; a body shop with two employees, one parts person, one administrative assistant, one laborer, eleven technicians, and one management staff.

In 2001, the fleet consists of approximately four hundred and sixty pieces of equipment and continues to grow. It was supported with a staff of eleven, which includes one management employee. The Bureau was then divided into three divisions, the Administrative, Procurement and Supply, and Maintenance / Repair Divisions. The Maintenance / Repair Division has three units, the Light, the Heavy, and the Body Shop Units. In 2006, the fleet has increased in size to 465 units and in 2008 to 519 units. The Bureau maintains a compliment of ten employees and a management staff of one for the operations.

In December of 2002, and by Mayoral Executive Order #5, two major changes in the organization took place. The first, and the one which will impact most on operations, is that total fleet management control was delegated to this Bureau. The second, recognizing the bureau is responsible for more than just maintenance, was the formal name for the bureau was changed from the Bureau of Vehicle Maintenance to The Bureau of Vehicle Management.

BUREAU OF VEHICLE MANAGEMENT

GENERAL

MISSION STATEMENT; To aggressively continue being an asset to the City operations by properly maintaining the City's fleet in the highest state of readiness at the lowest possible cost, and to provide a cost savings City wide Fleet Administration Program.

This annual report is prepared for the purpose of furnishing information and statistics relative to the operations of the Bureau of Vehicle Management for the calendar / fiscal year of 2008.

The Bureau is directly responsible for the management of the City's vehicle and equipment fleet. This includes total fleet management, inclusive of preparing specifications, purchasing, equipment maintenance and repair, and disposal when it is determined that a unit is no longer serviceable. While on the surface this may appear to be a simple task, it is not. The logistics of such an undertaking requires dedicated, highly technical, and knowledgeable individuals able to perform all the related functions in this multi-faceted operation. Keeping current with the ever-changing vehicles, their components together with governmental mandates are some of the several major challenges facing all involved.

The Bureau, itself, is divided into 3 separate divisions. They are the Administrative Division, the Procurement and Supply Division and the Maintenance and Repair Division. The Maintenance and Repair Division, unlike the other 2 divisions, is separated into 3 units. They are; the Light Duty Unit staffed with 7 employees, the Heavy Duty Unit staffed with 1 employee, and the Sheet Metal Unit (body shop) staffed with 2 employees. The Procurement and Supply Unit and the Administrative Divisions are each staffed with 1 employee. As the names for these units imply, each unit is primarily responsible for the repairs to vehicles and related equipment. This however, should not indicate that each operates independent of the others. They are specifically organized to interact with each other and share the total workload, specializing in the type of work as their name implies.

While the Bureau continues to function efficiently, there is an ever-increasing amount of work contracted to outside vendors. At one time, the Bureau performed 95 to 98% of all work in-house. With the ever-aging and ever-increasing size of the fleet and the ever-decreasing size of the support staff, this number has been reduced to 75 to 80%. It has to be understood that at one time, 1988 in fact, the fleet consisted of approximately 275 pieces of equipment and had a complement of 16 union employees. Today the fleet consists of over 500 pieces of equipment and currently has a complement of ten union employees. The budget in 1988 was $955,128.00, for 2008, it was in less than $2.5 million dollars.

2008 IN REVIEW

Just a review but we already know the opening question. That is, was the weather kind to the south central Pennsylvania area for 2008? The answer, yes, fairly so. In February a severe snow and ice storm over took the area on Valentines Day. Approximately seven inches of snow fell before changing to sleet and freezing rain making the storm a major challenge. Even though Punxsutawney Phil predicted, just prior to the Valentine Day's storm, that spring was right around the corner the rodent forgot to tell us we were going to have another storm for St. Patrick's Day. That's correct, another storm that dropped 10 more inches of that wonderful white moisture.

The progress made by this Bureau during the calendar year 2008 is briefly reviewed in the following articles.

OPERATIONS

Possibly the most important news of the year was the adoption of a 2008 "Leasing Authority". This program provided funding to subsidize the purchase of new vehicles and equipment. This 8.5 million dollar program provided the opportunity for many, much needed, fleet purchases. The purchases included units for Public Works (vehicles, trucks and support equipment), Public Safety (police sedans and vans all being equipped with new emergency equipment, fire apparatus and support equipment), Department of Building and Housing Development (sedans) and Parks and Recreation (vehicles, trucks and miscellaneous support equipment).

In short, the purchases undertaken or those about to be undertaken are many years over due. Most, if not all, of the vehicles / equipment being replaced has exceeded their useful lifetime costing more to maintain than the actual value of the unit itself. Delivery of the equipment will expand into both the 2008 and 2009 calendar / fiscal years. This Bureau is particularly busy addressing the needs for specifications and once the purchased is completed, the acceptance of the unit into the fleet and processing the old, surplus unit for disposal.

It also has to be recognized that once the units are brought into the fleet there are other cost saving methods that will be adopted to continue to save the City operational funds. Most recognizable is the fact that the Bureau of Vehicle Management is an in-house warrantee center for the three major automobile manufacturers, General Motors, Ford and Chrysler. The in-house warrantee program enables the City to address and be reimbursed those repairs that are normally covered by a manufacturer's warrantee. With the Police fleet comprising a major portion of the City's fleet, this Bureau will have the opportunity to complete repairs that are required to the units and be reimbursed, substantially, the labor and cost for parts.

The purchase of new vehicles and equipment will bring on another topic. That topic is the dreaded word, "fleet-creep". "Fleet creep" is the increase in size of the equipment fleet when new units are delivered, assigned and placed in service without the removal of an old unit. Thus, a major effort will be maintained that will require an old, surplus unit, to be removed for each new unit being assigned.

2008 IN REVIEW (continued)

PACC (PA Capital City) Automotive and Equipment Procurement

During 2008, the PACC program continued. It closed the year with an approximate total of 578 transactions. Purchases from this program are responsible for the savings of hundreds of thousands of dollars being saved by many governmental entities. The program for 2008 has, once again, expanded into another state. That state is the state of South Carolina. With this new State entry, the PACC is responsible for purchasing with government entities in Connecticut, New York, Washington State, West Virginia, Virginia, Washington DC, Maryland, Delaware, South Carolina and obviously Pennsylvania. The PACC is very good example of what the community of Harrisburg, can accomplish and the assistance that can be provided to other governments in general.

The year ended however on a down note. The PACC program was not renewed and went dark for the year 2009. The program is to be closely reviewed for possible improvements and simplification of the procurement process. With these improvements, an effort will be made for the PACC to be re-bid in the last quarter of the year for 2010. The fact the program is dark for the year is bitter to many. Numerous, governmental entities and once contracted vendors have made contact with this Bureau requesting the City consider immediate reactivation of the program.

FLEET MANAGEMENT

As noted in the 2007, the Bureau continues to aggressively pursuing "total automation". Closing 2008, this effort is just one step away from completion. The downloading of required fleet information such as, vehicle identification information, VIN / equipment / unit numbers, specifications, vendors, current and vendor's inventory, pricing to name a few, is now complete. Closely following will be the need to download the automated fuel program for completion. Once the fuel conversion is complete, all Bureau employees will receive the final operations training and the City will "go-live". Going live in 2009 will totally automate the fleet for the City. The tracking, monitoring and reducing the cost of operations and being more financially prudent will be the number one priority.

PRODUCTION

The enclosed chart (page 9) denotes the production, for the Bureau, historically for a five year period and for the calendar / fiscal year 2008. Production for the latest year is than compared directly against the preceding year. As depicted, the numbers of repairs (repair orders) for 2008, have decreased slightly overall. As explained in previous reports the continued fluctuating of repair numbers can be accounted to two factors. First, the overall age of the fleet and the type of repairs required, which are normally larger, and more involved. The second is the success of a preventative maintenance program which is addressed in the next paragraph.

Not included in the repair numbers is the preventative maintenance performed. There was a substantial increase in the number of PMs performed. This increase in PMs has definitely, as it should, a positive effect on operations by reducing the overall number of repairs required.

2008 IN REVIEW (continued)

RECYCLING – THE "OPERATIONS GREEN FLEET PROGRAM"

The City, and particularly this Bureau, continues to actively support a recycle "Green" program. Together with programs outlined in previous annual reports, the Bureau has continued efforts in 2008. With the City in the process of purchasing new vehicles a program known as "Operation Green Fleet (OGF)" was adopted. OGF is a program adopted by the administration to reduce the City's carbon foot print. The purchase and replacement vehicles and equipment is no exception to this program, in fact, just the opposite. OGF will affect the fleet with purchasing smaller, more fuel efficient vehicles, the purchase "flex fuel" vehicles whenever possible and the purchase of hybrid vehicles when the operations permits. For this fleet rotation, this effort is being accomplished by purchasing smaller, 4-cylinder engine, vehicles for administrative assignment, the purchasing of flex fuel / V-6 sedans, and the purchase of 10 hybrid vehicles with assignments to both management and administrative duties

Just a "snap-shot" review of other previously adopted environmentally friendly programs include; the use of re-refined lubricants, scheduling maintenance interval based on oil analysis, the used of drained lubricants in waste oil furnaces, the recycling of anti-freeze, use of alternate fuels such as bio-diesel, and the purchase and installation of energy efficient lighting in this Bureau's facility.

INCREASED FUEL COSTS

What was once a nuisance expense in any budget that involved a fleet has now turned into a major topic. That is, the price of fuel and product produced from petroleum. In the days of old, fuel would be calculated at hundreds, or sometimes thousands, of dollars. Today, however, it is calculated at hundred of thousands, if not millions, of dollars. For example, the following is an illustration of how fuel prices have changed over the past several years. The numbers provided, for a number of years, are the cost per gallon that was budgeted. New, with this report is the actual average price per gallon paid by the City will be included.

Actual Average			Budgeted		
Year	Diesel	Gasoline	Year	Diesel	Gasoline
1998	$0.54	$0.49			
1999	$0.66	$0.64			
2000	$1.03	$0.96			
2001	$0.81	$0.72			
2002	$0.95	$0.91			
2003	$1.07	$0.93			
2004	$1.61	$1.45			
2005	$2.13	$2.04			
2006	$1.76	$1.72			
2007	$2.25	$2.25	2007	$2.32	$2.27
2008	$3.17	$2.61	2008	$2.57	$2.52
2009			2009	$3.48	$2.87

2008 IN REVIEW (continued)

As shown, the numbers provided identifies that there has been a 432% increase in the cost of gasoline, and 487%increase of diesel fuel over an eleven year span.

The excessive cost of fuel continues to have a devastating effect on the overall City's budget. We, at this Bureau, continue to take every step available to insure the units in service are in the most efficient mechanical condition possible. It behooves all employees however, to also take every measure possible to reduce fuel consumption. Some steps include, ensuring tire pressure is correct, turn the engine off when just sitting for an extended period, restrict air conditioning use, maintain a clean vehicle and insure the unit is turned-in for service at the prescribed time.

While we can not stop using fuel, we should take the necessary measures, as a team, to reduce the amounts consumed and reduce the dependence we have on petroleum, and the precious natural resource, oil.

RECOGNITION

Humbly, the following paragraphs are prepared. Being an active member of the National Association of Fleet Administers (NAFA), in April of 2007, the Bureau Director was nominated and elected to serve on the Law Enforcement Committee for the organization. This committee oversees the Law Enforcement Group's involvement with the major automobile manufacturers and the organization, to insure the cooperation of all for the annual NAFA Conference. The Committee also works closely with other Police affiliated companies / organizations nurturing their involvement to support the police community with safe, quality products.

Participating on this committee requires a full understanding the law enforcement community, its operations, and its needs, plus the willingness to donate many man-hours of planning and active participation at the annual workshop.

For 2007 / 2008, the responsibilities for this committee have expanded and are now to encompass "Public Safety" as a whole and include other emergency entities such as EMS, and Fire. The involvement and participation in this committee is sure to bring much positive recognition and respect to the City of Harrisburg and the Administration. Continuing, in 2008, the responsibility was expanded. The organization has nominated and elected me to serve as Vice Chair of the Group.

In July of 2007, I made application to the American Public Works Association for the certification as a "Fleet Professional". To obtain this certification one must have substantial credentials and background in fleet management just to qualify and be accepted for application. Once the application is accepted one must take and pass a multi-faceted test and remain in an active status with fleet operations. The certification, once received, is for a period of five years. Qualifying for the exam with my many years of technical training, many certifications and fleet management background, I prepared myself and took the exam in September. In October, I was notified that I had passed the test and was now considered to maintain the title of "Certified Public Fleet Professional". In addition to the advancement with NAFA, I was asked to accept an appointment with the Ford Motor Company and serve on an advisory board to design and build "future" Police Vehicles.

2008 IN REVIEW (continued)

This voluntary Board is known as the Ford Police Vehicle Advisory Board (PAB). With the acknowledgement and concurrence of the administration, a four year appointment was accepted.

As a highlight of this exciting appointment most in the industry knows, 2011 is the last year for the Ford Crown Victoria to be built. Serving on the PAB, involves working with individuals of Ford in the Service, Engineering and Research and Development areas and recommending the design, equipping and production of the next police vehicles that will be offered by the Ford Motor Company.

Again and humbly, I stand proud of these and many other accomplishments that I was able to obtain not only for me but THE CITY OF HARRISBURG overall. These accomplishments include the following;

2002 Originator / Administrator PA Capital City (PACC) Procurement Program
2002 National Association of Fleet Administrator's Larry Goil Award
2003 Commonwealth of Pennsylvania's Governor's Award for Municipal Excellence
2005 American Public Works Association National Fleet Manager of the Year
2007 National Association of Fleet Administrators appointment to the Law Enforcement Group Committee
2007 American Public Works Association Certified Public Fleet Professional
2008 Appointed to serve (four years) on the Ford Police Vehicle Advisory Board
2009 MORE TO COME

VEHICLE MAINTENANCE AND REPAIR OPERATIONS

	2004	2005	2006	2007	5008	07 vs. 08
Equipment Repaired (Units)						
Trucks	925	748	625	886	766	-12%
Passenger	993	891	759	839	623	-25%
Heavy Equipment	461	353	111	201	154	-21%
Misc. Equipment	72	34	61	23	50	+110%
Total Units	2912	2026	1856	1931	1593	-18%
Equipment Preventive Maintenance						
(Not calculated in above repairs)	441	377	347	566	685	+21%
Fuels Dispensed						
Gasoline	261,500	268,045	240,987	221,616	211,005	-8%
Diesel	198,357	238,036	215,424	221,506	192,473	+3%
Total Gallons	459,857	586,430	456,430	443,122	403,122	-3%
Invoicing						
Utilities	$228,204	$237,309	$228,881	$226,673	$230,181	+2%
General Fund	$506,769	$459,260	$491,455	$378,905	$333,180	-12%
Others	$941	$1,033	$1,819	$1,424	$1,760	+23%
Total	$735,994	$697,602	$722,155	$607,005	$565,121	-7%

Approximately eighty five and a quarter (85.25) hours of overtime were exhausted for the fiscal year 2008.

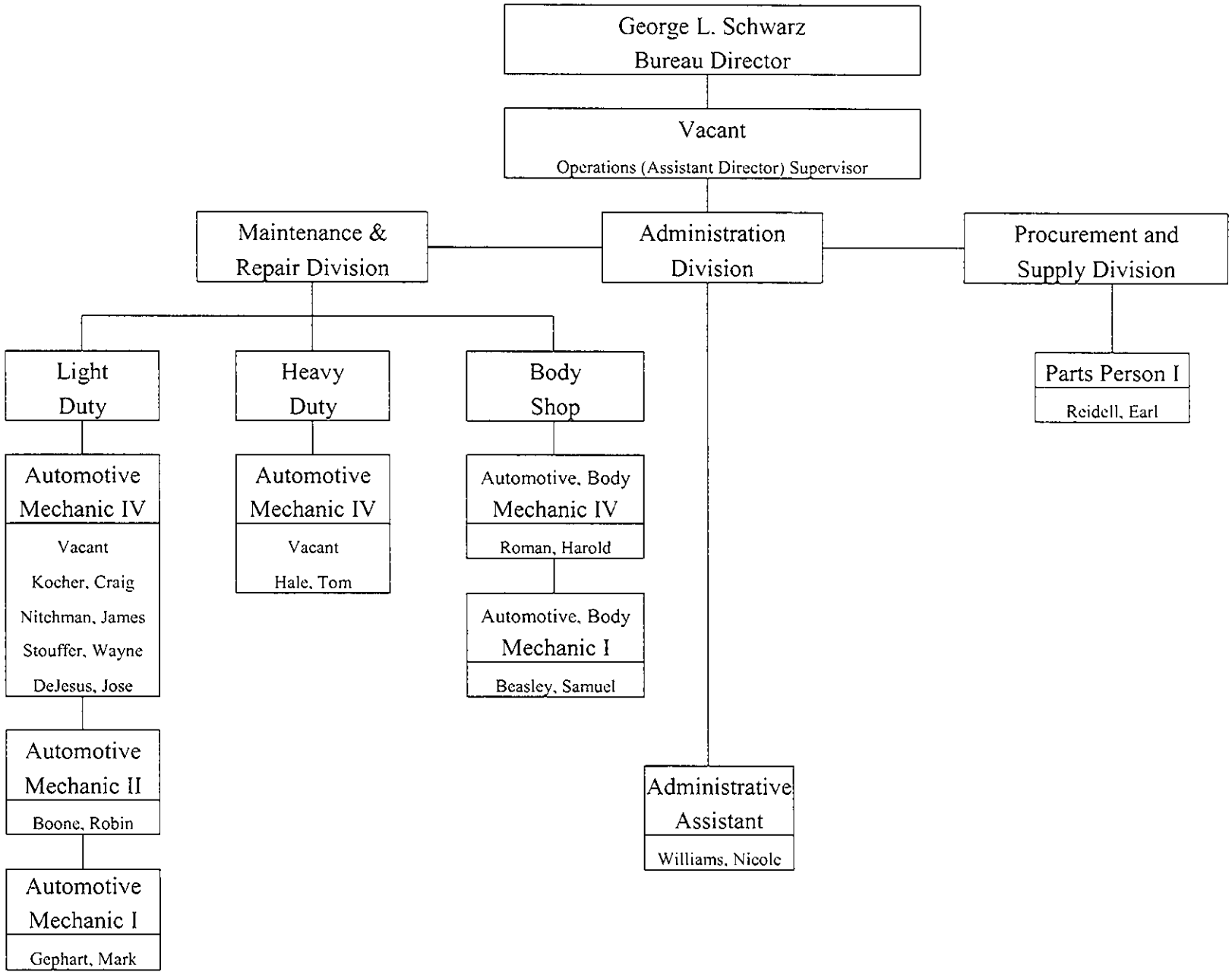
The average work order backlog was 43 jobs per month.

BUREAU OF VEHICLE MANAGEMENT

GEORGE L. SCHWARZ, DIRECTOR

2008 EMPLOYEE ROSTER

BEASLEY, SAMUEL	AUTOMOTIVE BODY MECHANIC III	10/15/79
BOONE, ROBIN	AUTOMOTIVE MECHANIC III	01/06/97
DEJESUS, JOSE	AUTOMOTIVE MECHANIC IV	07/20/88
GEPHART, MARK	AUTOMOTIVE MECHANIC I	08/03/92
HALE, TOM	AUTOMOTIVE MECHANIC IV	06/05/89
KOCHER, CRAIG	AUTOMOTIVE MECHANIC IV	03/03/75
NITCHMAN, JAMES	AUTOMOTIVE MECHANIC IV	04/14/75
REIDELL, EARL	PARTS PERSON I	01/07/91
ROMAN, HAROLD	AUTOMOTIVE BODY MECHANIC IV	07/06/01
STOUFFER, WAYNE	AUTOMOTIVE MECHANIC IV	08/10/87
WILLIAMS, NICOLE	ADMINISTRATIVE ASSISTANT	10/20/03


George L. Schwarz
Bureau Director
Vacant
Operations (Assistant Director) Supervisor
Maintenance & Repair Division
Administration Division
Procurement and Supply Division
Light Duty
Heavy Duty
Body Shop
Parts Person I
Reidell, Earl
Automotive Mechanic IV
Vacant
Kocher, Craig
Nitchman, James
Stouffer, Wayne
DeJesus, Jose
Automotive Mechanic IV
Vacant
Hale, Tom
Automotive, Body Mechanic IV
Roman, Harold
Automotive, Body Mechanic I
Beasley, Samuel
Automotive Mechanic II
Boone, Robin
Automotive Mechanic I
Gephart, Mark
Administrative Assistant
Williams, Nicole

2008 BUDGET

PERSONNEL – SERVICES	
Salaries – Mgmt.	55,763
Salaries – BU	424,116
Overtime	2,284
Fringe Benefits	192,217
TOTAL	674,380
Communications	3,500
Professional Fees	0
Utilities	41,300
Insurance	0
Rentals	5,500
Maintenance & Repairs	160,650
Other Services	15,850
Supplies Expenses	1,588,582
Minor Capital Equipment	
	1,815,382
CAPITAL OUTLAY	0
TOTAL APPROPRIATION	2,489,762

JOB CLASSIFICATION	BUDGET	ALLOCATION
Director (VMC)	1	55,763
TOTAL MANAGEMENT	1	55,763
Automotive Mechanic IV	5	224,420
Automotive Body Mechanic IV	1	44,754
Parts Person II	1	39,480
Automotive Mechanic II	2	79,060
Automotive Body Mechanic I	1	36,372
Total Bargaining Unit	10	424,116
Overtime		2,284
FICA		36,887
Healthcare Benefits - Active		136,024
Healthcare Benefits - Retired		19,306
Total Fringe Benefits		192,217
TOTAL	11	674,380

ADVANCED WASTEWATER TREATMENT FACILITY

MICHAEL DEILY – SUPERINTENDENT

ACCOMPLISHMENT REPORT

GENERAL

This annual report is prepared for the purpose of furnishing information pertinent to the operation and maintenance of the Harrisburg Advanced Wastewater Treatment Facility (AWTF) during the calendar year 2008. The function of the Harrisburg AWTF is to protect the quality of its receiving waters: namely, the Susquehanna River and the Chesapeake Bay. At the Harrisburg facility, wastewater processing operations include preliminary, primary, and advanced secondary treatment.

Under the direct management of the City of Harrisburg and ownership by The Harrisburg Authority, the treatment facility was properly operated and maintained during 2008. The facility has a permitted capacity of 37.7 MGD while serving an estimated population of 122,000 residents from the City of Harrisburg; the Boroughs of Paxtang, Penbrook, and Steelton; Susquehanna Township; and portions of Lower Paxton and Swatara Townships. Exhibits I through IV have been developed to graphically demonstrate various components.

Throughout the year, the facility met National Pollutant Discharge Elimination System (NPDES) requirements, with two exceptions. The permit requirements address hydraulic loading and organic discharges established by the United States Environmental Protection Agency and the Pennsylvania Department of Environmental Protection. The resulting overall compliance with the NPDES permit limits was 99.0 percent.

Appended to the end of this report are tabulations based on the statistical information gathered over the year. To graphically demonstrate various treatment characteristics, Figures I through III have been developed.

HISTORY AND DEVELOPMENT

In 1957 the City of Harrisburg created the Harrisburg Sewerage Authority to construct a wastewater conveyance system and primary treatment facilities. The initial project, completed in 1959, included intercepting sewers, two pump stations, force mains and a 26.8 MGD primary wastewater treatment plant. The treatment plant was designed to remove grit and settleable solids, as well as to disinfect treated wastewater prior to discharge to the receiving stream, which is the Susquehanna River. Sludge conditioning was achieved by thickening, anaerobic digestion, elutriation, dewatering and drying or incineration. Sludge disposal techniques included liquid land application, sale of dried sludge to agriculture users and incineration.

In 1969, the City received an order from the Commonwealth of Pennsylvania to upgrade its level of treatment to comply with new Federal water quality standards. After studies to determine the most cost-effective means of achieving upgraded treatment, the City, in 1972, directed the Harrisburg Sewerage Authority to proceed with the design of a 30.9 MGD high purity oxygen activated sludge process with chemical treatment for phosphorus removal. Also, sludge conditioning and disposal were redesigned and relocated to the Dewatering and Drying Building. They included chemical condition prior to vacuum filtration with final disposition of the dewatered sludge being transported to the Harrisburg Steam Generating Facility. The co-disposal option eliminated the necessity of fossil fuels for sludge drying and maximized use of existing City facilities.

Financing of the Harrisburg AWTF was made possible through a $19.6 million construction grant from the United States Environmental Protection Agency and the sale of the Harrisburg Sewerage Authority's Sewer Revenue Bond issue which provided the local financial match. Construction of the project began in 1976 and it was operational in 1979.

During 1984, the City initiated and the Harrisburg Sewerage Authority implemented a co-generation project utilizing the digester's methane gas to generate electricity for sale to the Pennsylvania Power and Light Company. The heat, generated from this process, is reclaimed via a water-cooled engine jacket and is used to heat the primary digester and plant buildings.

Upon evaluation of the existing sludge dewatering process at the Dewatering and Drying Building in 1989, it was determined to be outdated and inefficient. Consequently, the sludge dewatering process was moved to the main plant with the installation of two Belt Filter Presses and the placement of dewatered sludge on a storage pad for temporary holding prior to hauling to a landfill for disposal.

Other improvements which occurred include the relocation of the chlorination system, expansion of the laboratory, and construction of a conference room in 1990. In 1991, one of two air compressors associated with the pure oxygen system was downsized to produce an annual savings of $97,000.00 in electrical charges. A new 10,500 square foot garage was constructed in 1994 to house conveyance and treatment equipment. During the mid 1990's, the original Detritor System was replaced with a Pista Grit Removal System and a Cyclone Degritter System was installed on the primary sludge process system. As a result of this improvement, the facility received a hydraulic upgrade for daily average flow from 30.9 MGD to 37.7 MGD. The last major upgrade to the facility occurred in 1998 and included the installation of a supervisory control and data acquisition (SCADA) computer system which was modified and upgraded in 2008.

PROCESS

The treatment process consists of preliminary, primary, and advanced secondary treatment. The unit processes and equipment can be found in Exhibit I. Preliminary treatment is designed to remove substances that might be harmful to downstream systems or adversely affect the operation of the treatment plant. Methods and equipment employed to accomplish this include mechanical bar screens at the Front Street and Spring Creek Pump Stations, a Pista Grit Removal System for raw wastewater, and a Hydrogritter for sludge at the main facility.

Primary treatment consists of four sedimentation tanks designed to separate the settleable and floatable solids from the wastewater for appropriate handling. Sludge that accumulates in the tanks is pumped to gravity thickeners, and the treated wastewater is pumped to the secondary treatment units.

To further reduce pollutants at the Harrisburg AWTF, advanced secondary treatment is used. The objective of the secondary system, or activated sludge process, is to convert nonsettleable substances, in colloidal or dissolved form, into biological floc. The biological floc is developed in three pure oxygen aeration tanks and is settled out in six secondary clarifier tanks, providing for a high degree of treatment.

Phosphorus removal is accomplished by a chemical process. Coagulants such as ferric chloride or ferrous sulfate combine with phosphate in the wastewater to form a floc that is subsequently removed in the secondary clarifiers.

Biological and chemical flocs produced in secondary treatment are removed from the six secondary clarifiers. Most of the settled floc is pumped to aeration tanks to seed the process. The remainder is transferred to the two gravity thickeners.

The treated wastewater is disinfected by chlorine prior to discharge into the Susquehanna River. Four chlorine contact tanks provide the required contact time for disinfection as required by regulatory agencies. Disinfection removes or inactivates pathogenic organisms.

The primary and secondary sludges are combined and thickened in two gravity thickeners. The sludge is then pumped to two primary digesters. Anaerobic bacteria in the digesters consume organic matter in the sludge and produce gas containing approximately 65 percent methane. The digester gas is used as an energy source for heating the primary digesters and facility buildings, and as a fuel to operate two 400-kilowatt generators. The primary digested sludge is transferred by gravity displacement to two secondary digesters. These units permit additional sludge decomposition, gravity concentration, and storage of methane gas and sludge.

Ultimate sludge disposal is accomplished by dewatering on a belt filter press. The end product, consisting of approximately 18.6 percent solids, is then placed on a sludge holding pad prior to transporting to a landfill or beneficial reutilization site.

OPERATION

The AWTF serves an urban area of 43 square miles. The hydraulic load to the plant averaged 23.3 MGD in 2008, an increase from the 2007 average flow of 21.3 MGD. March was the high flow month with an average of 34.2 MGD, while the lowest flow period occurred in August, with an average of 15.6 MGD.

The organic load to the plant is the measure of pollutant strength and was recorded in terms of biochemical oxygen demand (BOD), suspended solids (SS), and phosphorus (P). The annual average daily values were 139 mg/l, 145 mg/l, and 3.6 mg/l, respectively. In terms of poundage, the BOD average was 27,011 pounds per day, the SS averaged 28,177 pounds per day, and the P average was 700 pounds per day. Organically, the 2008 values were more than 2007 values. The former yielded 25,580 pounds per day BOD, 24,692 pounds per day SS, and 657 pounds per day P.

The yearly average effluent carbonaceous biochemical oxygen demand (CBOD) per day was 8 mg/l or 1,603 pounds, SS averaged 15 mg/l or 3,104 pounds, and P was 1.5 mg/l or 264 pounds. The destruction of pathogenic organisms, as measured by the fecal coliform analysis, averaged 34 cfu/100 ml on the year while using a monthly average of 6,328 pounds of chlorine disinfectant.

Operation removal efficiency varied nominally in 2008 with overall removal rates of 93.0 percent for CBOD, 87.3 percent for SS, and 57.2 percent for P.

Biosolids handling and processing consists of a variety of operations that incorporate concentration, stabilization, dewatering, and landfilling. Late in 2007, the AWTF received a permit for the Beneficial Reutilization of Biosolids and began reclaiming a surface mine in Northern Dauphin County. This program continued successfully in 2008. The average daily removal of solids during 2008 was 7.4 dry tons per day. The cost per dry ton of solids averaged $227, a significant decrease of 30% from the 2007 cost of $322. The total of wet solids placed in landfills and reclamation sites during the year was 14,847 tons and consisted of an average of 18.3 percent solids.

On July 1, 2008, The Harrisburg Authority was issued a new NPDES permit by the Department of Environmental Protection which contained all regulated effluent parameters. New provisions of the permit include nutrient cap loads associated with the Chesapeake Bay Initiative and a reduction of the effluent ammonia concentration limit from 17 mg/L to 11 mg/L, both of which will take effect on June 1, 2012. As a result, the design phase for modification and upgrade of the treatment facility commenced during the year.

The values referred to in this section can be found in Exhibits V through X.

MAINTENANCE

The responsibilities of the Maintenance Division include the maintenance of all properties of the AWTF. Mechanical problems that did occur were corrected in a minimal amount of time. Many potential breakdowns were averted through a proactive preventive maintenance program and a systematic replacement policy for inventory parts. City expenditures for repairs and replacement of treatment equipment totaled $452,604.87.

Major projects completed by this division in 2008 include:

BELT FILTER PRESS

- Replaced the chain tensioning assembly for the dewatering drum for Belt Filter Press Number 1.
- Replaced the upper belt palm actuator on Belt Filter Press Number 1.
- Repaired the roller shaft and replaced the bearings on the lower belt tracking roller on Belt Filter Press Number 1.
- Replaced the lower belt tension roller and bearings on Belt Filter Press Number 1.
- Replaced the drive motor and gearbox for the conditioning tank for Belt Filter Press Number 2.
- Replaced the dewatering drum screen on Belt Filter Press Number 2.
- Replaced the east side pneumatic cylinder and palm actuator for the lower belt tension and steering on Belt Filter Press Number 2.
- Replaced the overload relay and contactor for the conditioning tank for Belt Filter Press Number 2.
- Replaced the wash water meter for Belt Filter Press Number 2.
- Repaired the splice on the incline conveyor for the Belt Filter Presses.
- Replaced the tracking roller, five troughing rollers, and the belt on the on the horizontal conveyor for the Belt Filter Presses.
- Fabricated and installed a scrapper bar assembly on the horizontal conveyer for the Belt Filter Presses.
- Replaced the mixer motor and gearbox for the Number 1 Polyblend Unit for the Belt Filter Presses.
- Replaced the disperser auger and mixing chamber on the Number 2 Polyblend Unit for the Belt Filter Presses.
- Replaced the hose and couplings on the hot water pressure washer in the Belt Filter Press Building.

BOILER BUILDING

- Replaced the pressure relief valve on the Number 2 Boiler in the Boiler Building.

CHEMICAL STORAGE BUILDING

- Performed the annual Unox turnaround preventive maintenance and instrument calibrations.
- Replaced the after cooler on Joy Compressor Number 1.
- Replaced the main oil pump on Joy Compressor Number 2.

CO-GENERATION EQUIPMENT

- Repaired the air intake pipe on Enginator Number 2 in the Co-generation Building.
- Replaced the large engine cooling fan in the Co-generation Building.
- Replaced the digital gas meter for Enginator Number 1 in the Co-generation Building.
- Replaced the hot water recirculation pump for Enginator Number 1 in the Co-generation Building.
- Replaced the gaskets on the Riley-Beard heat exchanger for Enginator Number 2.
- Cleaned and lubricated the valve unloaders on both Ingersoll Rand Gas Compressors.

CONTROL BUILDING

- Replaced the hose two times each in the Number 1 and 2 Watson-Marlow Sludge Pumps for the Belt Filter Presses.
- Replaced the booster pump assembly and coupling for Belt Filter Press Number 1.
- Replaced the booster pump assembly and motor for Belt Filter Press Number 2.
- Replaced the motor on the channel blower for the Primary Settling Tanks.
- Replaced the motor and electrical contactor for Air Compressor Number 2 in the basement of the Control Building.

DEGRITTER BUILDING

- Installed a new sump pump and piping for the drain in the Degritter Building Garage.

DIGESTED SLUDGE PUMP STATION

- Replaced the air compressor for the Ingersoll Rand Gas Compressor valve unloaders.
- Fabricated and installed a water accumulator in the gas line at the Digested Sludge Pump Station.

DISTRIBUTION BOX

- Replaced the refrigerator for the Secondary Influent Sampler at the Distribution Box.

FINAL SETTLING TANKS

- Rebuilt the two scum pumps in the pipe gallery at the Final Settling Tanks.
- Replaced two rake arm assemblies and 376 feet of ¼-inch grease line in Final Settling Tank Number 2.
- Rebuilt the gear motor assemblies on Final Settling Tanks Number 3 and 5.
- Rebuilt the main drive gearbox and motor, rebuilt the corner sweeps, and replaced the grease lines and tires for Final Settling Tank Number 6.

FRONT STREET PUMP STATION

- Replaced the hydraulic ram cylinder on the rag removal system at the Front Street Pump Station twice.

GAS STORAGE SPHERE

- Fabricated and installed an insulated box for the gas valves under the Gas Storage Sphere.

GREASE PIT

- Replaced the hose and 15 gallons of lubricant in the Watson/Marlow Grease Pump at the Chlorine Contact Tanks.
- Replaced the inlet pipe and installed three pipe support brackets on the Watson/Marlow Grease Pump at the Chlorine Contact Tanks.
- Installed forward and reversing electric contactors on the Watson/Marlow grease pump at the Chlorine Contact Tanks.
- Replaced the air line and diffusers in the Grease Pit.

OXYGENATION GENERATION EQUIPMENT

- Performed the annual Unox turnaround preventive maintenance and instrument calibrations.
- Replaced the main lube oil pump on Unox Compressor Number 1.
- Replaced the Number 3 Mixer Motor on Oxygenation Tank Number 3.

PIPE TUNNEL

- Replaced a four foot section of four inch pipe in the high pressure gas line in the Pipe Tunnel.

PRIMARY DIGESTERS

- Replaced the sludge tubes in Heat Exchanger Number 1 at the Primary Digester Control House.
- Repaired the gas line on the roof of Primary Digester Number 1.
- Flushed the gas lines and replaced the flame arrestors for the Fuller Gas Blower in the Primary Digester Control House.

PRIMARY SETTLING TANKS

- Replaced the chain and four flights for the influent collectors in Primary Settling Tank Number 1.
- Repaired six sprockets and replaced the chain for the cross collectors in Primary Settling Tank Number 1.
- Replaced the Rotork Automatic Valve Operator and rebuilt the gearbox on Primary Settling Tank Number 2.
- Replaced the sampler head for the influent sampler at the Primary Settling Tanks.

RETURN SLUDGE PUMP STATION

- Replaced the Seir Bath coupling and aligned the motor for Return Sludge Pump Number 1 and 2.
- Rebuilt the pump assembly, replaced the couplings, and aligned the motor for Return Sludge Pump Number 3.

SETTLED SEWAGE PUMP STATION

- Replaced the coupling on Hoffman Blower Number 1 in the basement of the Settled Sewage Pump Station.
- Repaired the chain valve operators on Settled Sewage Pumps Number 2 and 3.
- Replaced the seir bath coupling on Settled Sewage Pump Number 4.

SLUDGE STORAGE BUILDING

- Replaced the ballasts in the three overhead lights in the Sludge Storage Building.

SPRING CREEK PUMP STATION

- Rebuilt the Channel Monster rotating screen assembly at the Spring Creek Pump Station.
- Installed forward and reversing electric contactors on the two Channel Monsters at the Spring Creek Pump Station.
- Repaired the float control for the pneumatic seal water system at the Spring Creek Pump Station.

THICKENERS

- Rebuilt the pump assembly for the Thickener Pump Number 1.
- Replaced the scum baffle and weirs in Thickener Number 1.
- Replaced the scrappers on the rake arms and squeegees on the collectors in Thickener Number 1.
- Repaired (weld) the scum box and replaced the ramps for the collector arm in Thickener Number 1.

FIELD MAINTENANCE

The Field Maintenance Division is responsible for the integrity of the conveyance system and the minimization of combined sewer overflows. The division also has the added responsibilities of pump station routine maintenance and debris clearance from waterways.

Projects completed by this division in 2008 included:

- Changed the grease fittings as needed and lubricated all equipment on the Regulating and Flood Chambers.
- Cleaned and washed down all twelve siphon basins six times each.
- Cleaned the effluent trough and flushed the drain line for the Grit Lagoon.
- Flushed and vactored the 1200 block of the Hemlock Interceptor.
- Flushed the 3300 block of the Front Street Interceptor to remove silt.
- Flushed the drain line and cleaned the catch basin in the garage of the Degritter Building.
- Flushed the high pressure gas line in the Pipe Tunnel.
- Inspected five blowout chambers with no maintenance or painting required.
- Inspected the Spring Creek, Paxton Creek, Asylum Run, Hemlock Street, and Paxton Creek Relief Interceptors. The inspections were performed twice to determine the condition of the interceptors.
- Removed 201 ton of debris from the Grit Lagoon.
- Removed trees and debris from various locations along Paxton Creek and Spring Creek on an as needed basis.
- Repaired the flood chamber frame and grates at CSO Number 032.
- Repaired the float assembly in CSO 041.
- Repaired (parged) holes in the diversion chamber at CSO Number 055.
- Repaired the steps on both ends of the loading dock at the AWTF Control Building.
- Updated the CSO reports for the current year.
- Assisted Plant Maintenance with the annual Unox turnaround and preventive maintenance.
- Assisted Plant Maintenance with the replacement of the scum baffle and weirs in Thickener Number 1.
- Assisted plant maintenance with the repairs to Primary Settling Tank Number 4.
- Assisted plant maintenance with repairs to the Front Street Pump Station bar screen.
- Assisted plant maintenance with the replacement of the sludge tubes in the Number 1 Heat Exchanger in the Primary Digester Control House.

- Unblocked the scum trough for Final Settling Tank Number 4.
- Unblocked and flushed the drain lines from the Co-generation Building to the Primary Digester sump pump.
- Vactored the floor drain trough and flushed the line in the Degritter Building Garage.
- Vactored the grinder pump sump pit for the village at City Island.
- Vactored the Sludge Thickener Tank Number 1.
- Vactored the sump pump pit in the Pista Grit Garage.
- Vactored the grease pit and assisted plant maintenance with the replacement of the pipe in the Grease Pit.
- Vactored Primary Settling Tanks Number 1 thru 4.
- Vactored 68.6 ton of debris from Pista Grit Tanks 1 thru 4.
- Vactored and flushed the drain line in the ventilation shaft for power Vent Number 37 in the Pipe Tunnel.
- Vactored the scum pits for Thickener Number 1 and 2.
- Washed down 58 regulating chambers and 46 flood chambers and lubricated the gates.
- Washed down 174 manholes over the interceptors.

BUDGET

The budget, as prepared by management, is intended to control expenditures while insuring efficient facility operations and to balance receipts and revenues collected during the budget year. The treatment facility had an operating expense of $11,923,492 and a total annual cost of $14,761,700, debt service cost included. The revenues derived during the budget year were $15,483,043. Monies of the Sewer Revenue Trust Fund were used to supplement the shortfall in revenue. Refer to Exhibit XI for additional information on the 2008 expense and revenue budgets.

LABORATORY

The laboratory is a subdivision of the Operations division, providing technical data and support for the operation of the wastewater treatment facility. Daily analysis for all permitted parameters was performed on the influent and effluent, as well as intermediary flows. Daily testing also included the analysis of processed sludges and by-products. The laboratory staff collected and analyzed samples for the industrial user monitoring program and analyzed the samples required for the continuation of the contract waste hauling program.

In 2008 the laboratory analyzed thirty-eight permit scans, one hundred thirty surveillance scans, sixty-five industrial monitoring surveys, and nine hundred twenty-one routine hauler

analyses with an average turnaround time of less than thirty days. Testing required for the contract waste hauler and industrial monitoring programs generated $49,583 in laboratory revenue.

Throughout this time, the laboratory maintained its program for annual US EPA Priority Pollutant monitoring on influent, effluent, and sludge cake. To fulfill landfill sludge disposal requirements, annual PA DEP Form 43 analyses were performed on sludge cake, and all necessary records were maintained. As prescribed by a general permit for beneficial reutilization of biosolids, bi-monthly sampling commenced to test for pathogen reduction, vector attraction reduction, macronutrients and other pollutants not encompassed by analysis for other reasons. In addition to the daily routine testing, metals were analyzed quarterly on influent, effluent and sludge cake, and other process waters, sludges and by-products. Local Limit parameters were performed quarterly as mandated by the permit. The frequency of analyses for total nitrogen was changed to weekly in order to meet the regulatory requirements of our new NPDES permit and the terms of Pennsylvania's Chesapeake Bay Nutrient Reduction Strategy.

The increased frequency of some testing resulted in decreased testing of other analytes used for operational control. After evaluation of historical data and trends, it was determined that certain analyses could be eliminated from the daily testing regimen and analyzed weekly. This practice continued in 2008 with no adverse effects on the operation of the facility. Additionally, on weekends or holidays when the laboratory could not be staffed due to a reduction in the employee compliment, outsourcing was employed as a method to meet permit requirements for daily testing, as well as reduce overtime costs.

Calendar year 2008 again saw quality assurance as a top priority with an objective to improve the accuracy and precision of the data generated. The laboratory achieved PADEP laboratory accreditation in accordance with 25 PA Code, Chapter 252 regulations. This mandated the generation of a Quality Manual, a standard operating procedure manual for the approved scope of testing, as well as additional performance testing measures. A Proficiency Environmental Testing Program offered by Analytical Products Group, Inc. (APG) provided the laboratory with semi-annual quality assurance samples and statistical review of results. Exhibit XII details the performance of the laboratory during its 2008 voluntary participation in this program. In addition to the APG testing, an internal quality assurance program was improved upon as a result of a PADEP Laboratory Certification inspection late in the year. This included analysis of blank, duplicate and spiked samples, the use of second source calibration standards, and increased documentation of all stages of the analysis of permitted parameters. US EPA certified samples of known values were analyzed on a regular basis as a verification of internally prepared standards. If the results of any quality assurance testing did not fall within the laboratory's control limits, the entire analysis was repeated. Quality assurance records were maintained, and log books for chemicals and reagents received, reagents prepared and equipment calibration and maintenance were created. This simplifies a method for technicians, supervisors and inspecting agencies to trace progress.

In the 2008 EPA-DMR Quality Assurance Evaluation, the standard measure of a testing laboratory's performance, the laboratory analyzed all permitted and non-permitted parameters

within US EPA acceptance limits. Exhibit XIII highlights the laboratory's evaluation received by US EPA. The last certification inspection conducted by PADEP occurred in December 2007. The results of the inspection were generally favorable to the City despite additional quality control being needed relative to documenting equipment performance.

INDUSTRIAL WASTE PRETREATMENT PROGRAM

The function of the EPA Industrial Waste Pretreatment Program is to ensure that industrial users (IUs) comply with applicable federal, state, and local pretreatment program effluent discharge limitations and regulations. Industrial user compliance eliminates interference or possible damage to the conveyance and treatment system, untreated waste from passing through the AWTF to the receiving stream, the contamination of sludge which limits disposal and reuse options, and the exposure of personnel to chemical, explosion or fire hazards.

During the year, no additional significant industrial users[1] were permitted. The total number of permitted industrial users in 2008 was ten. Ending 2008, the total number of permitted industrial facilities remained at ten. Of the ten permitted industrial users, three are classified as categorical and seven as noncategorical industrial users.

No compliance schedules were issued during 2008 and the number of permitted industrial users on a formal compliance schedule is zero.

Inspection and sampling activities performed by the City during the year included facility inspections, self monitoring inspections, and compliance sampling. In 2008, ten facility inspections and ten self monitoring inspections were performed at ten industrial facilities. Compliance sampling schedules remained at twice annually for three consecutive days with each day providing a separate sample. Additional monitoring is performed when necessary. The total number of significant industrial users sampled for compliance monitoring was ten and encompassed sixty-five sampling visits. Of the three significant industrial users not sampled through three consecutive days, the four sites are landfills with a uniform and seasonal discharge.

Self monitoring sampling and reporting activities for significant industrial users remained at quarterly for a conventional pollutant discharger and monthly for a metal and organic priority pollutant discharger. The total number of significant industrial users required to submit a self monitoring report is nine and the total number of self monitoring sampling events was ninety-seven. Of the one significant industrial user not sampling, it is a landfill where the City opted to perform quarterly compliance sampling. In this instance, self monitoring and reporting is not required.

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(1) Significant industrial user as defined by Title Nine, Part Five, Section 9-501.1 of the City's Codified Ordinances means all categorical industrial users or any noncategorical industrial users that:

A). Have a discharge flow of 25,000 gallons per day or more per average workday of process wastewater; or
B). Have an average process flow which makes up five percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
C). Have a reasonable potential in the opinion of the Control or Approval Authority to adversely affect the treatment plant through inhibition, pass through of pollutants, sludge contamination, or endangerment of AWTF workers, or to violate any pretreatment standard or requirement.

During the 2008 calendar year, three violation notices were issued. Two letters of violation were issued for noncompliance with effluent discharge limits and one for a reporting violation. Where noncompliance persisted or an industry did not return to compliance within a satisfactory time frame, significant noncompliance enforcement action is taken. No notices of violation were issued for significant noncompliance in 2008. As a result, public notification was not required.

For additional details on industrial users' performance, please refer to the exhibits listed below:

Exhibit XIV	-	Pretreatment Performance Summary
Exhibit XV	-	Regulated Industrial Users 2008
Exhibit XVI	-	Enforcement Actions 2008
Exhibit XVII	-	Compliance Sampling/Inspection Schedule 2009
Exhibit XVIII	-	Annual Newspaper Publication of 2008 Significant Noncompliance Violators

PRETREATMENT PROGRAM DEVELOPMENTS

During the 2008 calendar year, the AWTF did not experience an upset or permit violation attributed to the indirect discharge of industrial waste. NPDES permit violation(s) caused by something other than an industrial discharge are as follows: Ammonia limit exceedances were caused by lower than normal flows. In order to monitor toxic and incompatible pollutants, various analyses were performed on the plant's influent, effluent, and sludge. The results of this activity are detailed in Exhibit XIX. Influent, effluent, and sludge average metals concentrations for current and past years are graphically illustrated in Figures I, II, and III.

Interpretation of influent metals concentration trends contained on Figure I show an increase in zinc concentrations in 2008. The lead concentration trend line appears to have leveled off after increasing in 2006. The copper concentration trend line continues to show a slight upward trend since 2004. The chromium concentration trend line remained the same in recent years. Arsenic, cadmium, cyanide, mercury and nickel concentrations show no appreciable amounts detected in 2008.

Interpretation of effluent metals concentration trends contained on Figure II show a slight increase in zinc and lead in 2008. The copper concentration trend line appears to have leveled off after increasing in 2007. The arsenic, cadmium, chromium, cyanide, lead, mercury and nickel concentrations show no appreciable amounts detected in recent years.

Interpretation of filter cake or biosolids metals concentration trends contained on Figure III show a slight increase zinc concentrations in 2008. The high level of zinc is attributed to the use of a zinc based corrosion inhibitor in the City's water supply. Copper and lead concentration trend lines appear to have leveled off in 2008. Chromium and nickel concentrations show no upward or downward trend in recent years. Arsenic, cadmium, cyanide and mercury concentrations show no appreciable amounts detected in 2008.

Local limits were approved on September 30, 1988, by the US EPA and adopted by the City of Harrisburg on October 28, 1988. The local discharge limitations were developed with

the assistance of the US EPA computer program PRELIM and are based on the allowable headworks loading method and a safety factor of twenty-five percent. Allocation of the daily maximum allowable industrial loadings of the pollutants was achieved by the uniform concentration technique based on total industrial flow.

A toxics reduction evaluation (TRE) was completed on October 9, 1991, as a part of Harrisburg's NPDES permit renewal process to verify the presence or absence of toxic pollutants in the discharge. As a result of the TRE, a new zinc local limit was adopted by the City of Harrisburg on June 24, 1992, and approved by the US EPA on May 19, 1993. The zinc local discharge limitation was developed with the assistance of the US EPA computer program PRELIM and is based on the allowable headworks loading method and a safety factor of twenty-five percent. Allocation of the daily maximum allowable industrial loadings of the pollutants was achieved by the uniform concentration technique based on total industrial flow.

In addition to the development of the daily maximum loadings, instantaneous maximum concentrations in grab samples have also been calculated. The instantaneous maximum values were determined by multiplying the daily maximum concentration, where applicable, by a factor of two. A multiplier of two was chosen to correspond to the same multiplier used by the Commonwealth of Pennsylvania's Department of Environmental Protection in developing the instantaneous maximum values in Harrisburg's NPDES permit.

Industrial Waste Pretreatment Program changes that occurred in 2008 are as follows: receipt of an updated baseline monitoring report and industrial wastewater discharge application, and re-issued a five-year industrial user permit to the Norfolk Southern Corporation (Harrisburg Yard) and Swatara Township Landfill; issued a baseline monitoring report and industrial wastewater discharge application to Ames True Temper Incorporated, the Norfolk Southern Corporation and Turbine Airfoil Designs, Inc.; notified all industrial users of Codified City Ordinance amendments that incorporate portions of the Federal "Pretreatment Streamlining Regulations"; revised industrial user permits and permit re-applications as issued to implement provisions of the "Pretreatment Streamlining Regulations"; requested all contributing inter-municipal jurisdictions to amend their wastewater rules and regulations and/or ordinances to incorporate amendments to the Codified City Ordinances that pertain to the "Pretreatment Streamlining Regulations"; received a wastewater rules and regulation update from the Susquehanna Township Authority and wastewater ordinance updates from the Steelton Borough and Swatara Township adopting relevant portions of the Codified City Ordinances containing the Federal "Pretreatment Streamlining Regulations".

The last pretreatment program audit was conducted on November 2 and 3, 2005 by US EPA representative Stephen G. Copeland. No deficiencies were found in the pretreatment legal authority, application of standards, control mechanisms, compliance monitoring, enforcement, data management and public participation, or resources. The City was noted to be operating a fully successful pretreatment program. On August 2, 2007, an audit of the City's compliance sampling procedures was performed by US EPA representative Joe Reyna, III. One deficiency was cited. Despite sampler icing, the temperature of the composite sample was unable to be maintained at $\leq 6°C$ until collection or splitting. Seasonal and environmental conditions contributed to the deficiency. As a result of the "Pretreatment Streamlining Regulations" promulgated on October 17, 2005, several program changes were implemented in 2008. Program changes, where applicable, have been submitted to the US EPA and approved.

CONTRACT WASTE HAULING PROGRAM

The AWTF continues to be well known in Central Pennsylvania as a sludge disposal center for process and septic waste. The objectives of the Contract Waste Hauling Program (CWHP) are to 1) provide an alternate sludge disposal method to regional POTWs, food processing companies, and septic waste haulers; 2) collect permit, disposal, and laboratory fees in excess of expenses; and 3) increase digester gas production by decomposition of the waste by-products. Correspondingly, with increased gas production, there is an increase in cogeneration electrical sales.

A computer program is utilized by AWTF personnel to facilitate the administration of the CWHP. The program maintains customer information, controls daily transactions, produces invoices, and keeps complete accounting records for each customer. Computerization has reduced manual tasks, minimized errors, and structured CWHP activities.

All waste accepted at Harrisburg must meet certain criteria outlined in the Contract Waste Hauling Program Manual to insure the protection of AWTF personnel, structures, equipment, processes, and sludge disposal options. To insure that all waste complies with AWTF requirements, routine monitoring is performed by the facility's Laboratory.

Monitoring is accomplished through a complete scan upon permit application submittal, surveillance scans, or routine sampling of waste throughout the course of the year. In 2008, thirty-eight permit scans, one hundred thirty surveillance scans, and nine hundred twenty-one routine samplings were performed.

Disposal permits are issued for a one-year period, and each hauler is categorized as handling either process or septic waste. In 2008, thirty process and four septic disposal permits were issued; accordingly, $1,700.00 in permit application fees was collected. Disposal activities accounted for $638,813.30 in revenue, while an additional $21,816.00 was attributable to the sale of electricity based on an increase in methane gas production from the digestion of Contract Waste Hauling sludge. Additional details may be found on Exhibit XX and XXI.

COGENERATION PROGRAM

The cogeneration process utilizes methane gas produced in the anaerobic digestion process to fuel two 400-kilowatt generators. In turn, the generators produce electricity and heat. Electricity is sold to the Pennsylvania Power Light Electric Utilities at a rate of $0.06 per kilowatt-hour. Waste heat from the generators is used for space heating at the facility and for heating the Primary Digesters.

The cogeneration system utilizes a six-cylinder internal combustion engine and uses methane gas produced in the digesters as a fuel. Connected to the engine is a 400-kilowatt electrical generator. Heat is recovered from the engine's cooling system.

During 2008, the cogeneration facility operated 68 percent of the time. The average monthly kWh production rate was 199,350, with a yearly total production of 2,392,200 kWh.

The average monthly revenue collected was $11,961 with a yearly total of $143,532. These figures represent a substantial increase of 48% over the revenue from 2007. Refer to Exhibit XXII for complete details.

LOSS CONTROL PROGRAM

The Loss Control Program was established in 1985 with the objective of providing a work-place environment that precludes injury or illness to employees or harm to the community.

Specific parameters are 1) an executive representative responsible for activation and coordination of loss control activities; 2) a Safety Committee comprised of various subcommittees and headed by the Safety Director; 3) accident investigation and maintenance of records; 4) training and educational development to recognize hazards; and 5) control of physical, mechanical, and operational hazards.

Under the direction of the Training and Educational Committee, a video library has been maintained. The library consists of a television, VCR and DVD equipment, and videotapes ranging from Eye Safety to Confined Space Safety. Each quarter, the Safety Director selects a tape from the library which is played and viewed by all attending the quarterly Safety Meeting. The present video library has grown to fifty-two safety topics and seventeen training programs. The training tapes have proven valuable as a reliable source of important information.

The "Safety Now" newsletter is handed out to all employees each month and provides management staff with information relative to safety management and awareness.

In order to reduce health-associated costs through prevention, an on-site physical fitness room has been maintained and offers employees a place to exercise using various pieces of equipment. Providing employees with health-associated programs can provide a positive environment and encourage healthier habits.

CAPITAL PROJECTS

The Harrisburg Authority issued Sewer Revenue Bonds, Series A of 1988, in the principal amount of $12,700,000.

There were no improvements made in 2008 to the Sewage Conveyance and Treatment System using funds from the proceeds of the 1988 Series A Bonds. Engineering and design phases for the following projects began in 2008:

- Belt Filter Press Dewatering Equipment replacement
- Grit Removal System upgrade

ADVANCED WASTEWATER TREATMENT FACILITY

GOALS AND OBJECTIVES

2009

OPERATIONS

- Revise and update the Standard Operating Procedures manual for AWTF Operations.
- Implement a new Pump Station Access Program with employee personal identification numbers to assign accountability to pump station checks and maintenance.
- Remove from service, clean and inspect all Primary Settling Tanks and Final Clarifiers.
- Improve overall efficiency of plant operations to meet all permit requirements in a more cost effective manner.

MAINTENANCE

- Rebuild the roots blower for the influent channel for the Primary Settling Tanks.
- Replace the sludge tubes in Heat Exchanger Number 2 for the Primary Digesters.
- Vactor the wet well at the Market Street Pump Station.
- Repair the Pista Grit bypass gate in Chamber A.

LABORATORY

- Complete Whole Effluent Toxicity Testing required by our NPDES permit.
- Perform river and background domestic waste testing for the pretreatment local limits re-evaluation.
- Update and revise the Laboratory Standard Operating Procedures manual with more detail and graphics.

PRETREATMENT

- Assemble data and complete the local limits re-evaluation required by our NPDES permit.
- Reissue thirty-six Contract Waste Hauler permits.
- Re-issue four industrial user permits.

EXHIBIT I

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Unit Process and Equipment

Design Flow:	
Average (MGD)	37.7
Maximum (MGD)	64.1
Design Loadings:	
BOD (mg/l)	230
Suspended Solids (mg/l)	210
Phosphorus (mg/l)	10
NH3-N (mg/l)	15
pH	6.5-8.5
Grit Removal:	
Pista Grit Chambers	4
Dimensions - Circular	
Diameter (Ft.)	16
Maximum Water Depth (Ft.)	7
Volume Treated per Chamber (MGD)	20
Maximum Volume Treated (MGD)	80
Sludge Degritting	
Hydrodegritter	1
Primary Clarification:	
Primary Settling Tanks	4
Dimensions (Each)	
Length (Ft.)	270
Width (Ft.)	35
Average Water Depth (Ft.)	8.2
Capacity (Gallons, each)	581,175
Surface Area (Total Sq. Ft.)	30,800
Detention Time (2008 Flow-MGD 23.3)	
(Hours)	2.39
Primary Treatment Removal Rates: 2006 Data	
BOD Removal (Percent)	26
BOD Removal (Lbs./Day)	5898
Suspended Solids (Percent)	46
Suspended Solids (Lbs./Day)	10,140

Activated Sludge Oxygenation:	
Trains	3
Stages Per Train	4
Dimensions Per Stage	
Length (Ft.)	50
Width (Ft.)	50
Average Water Depth (Ft.)	14
Liquid Volume (Total Gallons)	3,156,000
Oxygen Generation	
Air Compressors	2
HP	1,000
Capacity (Each)	CFD
Distillation Column	1
Oxygen Capacity (Tons Per Day)	50
Detention Time (2008 Flow 23.3 MGD)	
2 Trains (Hour)	2.2
3 Trains (Hour)	3.3
Secondary Clarification	
Final Settling Tanks	6
Dimensions (Each)	
Length (Ft.)	102
Width (Ft.)	102
Side Water Depth (Ft.)	12
Liquid Volume gls (Each)	933,900
Surface Area (Total Sq. Ft.)	62,400
Detention Time (2008 Flow-MGD 23.3 MGD)	
4 Tanks (Hours)	3.85
5 Tanks (Hours)	4.81
6 Tanks (Hours)	5.78
Sludge Handling:	
Thickening Tanks	2
Dimensions	
Diameter (Ft.)	80
Side Water Depth (Ft.)	10
Free Board (Ft.)	1.5
Volume (Total Gallons)	968,775
Weir Length (Total Ft.)	503

EXHIBIT I (Continued)

Primary Digesters:	
Dimensions	2
Diameter (Ft.)	90
Side Water Depth (Ft.)	35
Cone Depth (Ft.)	10.67
Free Board (Ft.)	2
Effective Volume (Each)(Gallon)	1,833,800
Type-Fixed Cover, High Rate, Complete Mix	
Secondary Digesters	2
Secondary Digester No. 3:	
Dimensions	
Diameter (Ft.)	85
Side Water Depth (Ft.)	28
Core Depth (Ft.)	10.12
Effective Volume (Gallons)	924,100
Type-Fixed Cover	
Secondary Digester No. 4:	
Dimensions	
Diameter (Ft.)	85
Side Water Depth (Ft.)	26
Core Depth (Ft.)	10.12
Effective Volume (Gallons)	839,300
Type-Gas Holder Cover	
Gas Holder Storage Volume (Cu. Ft.)	55,500
Methane Gas Storage:	
Gas Sphere	1
Dimensions	
Diameter (Ft.)	42
Operating Pressure (Psig)	50
Capacity (Cu. Ft.)	38,793
Methane Content (Percent)	63
Sludge Dewatering:	
Belt Filter Presses	2
Width (Inches)	100
Cogeneration System:	
Driver Units	2
Type 4	
Make-Waukesha Model VHP 2900GSI	
No. of Cylinders	6
Fuel-Digester Gas	
Fuel Consumption (Cu. Ft./Day)	50,000-180,000
Generator Units	2
Type-Induction	
Make-Kato Engineering	
Output-400 KW, 480 V AC at 1,200-1,210 RPM	

Phosphorus Removal Feed System:	
Storage Tanks	3
Tank Volume (Each)(Gallons)	7730
Chemical Pumps	2
Disinfection Feed System:	
Chlorinators	2
Chlorine Cylinders' Type (Ton)	1
Cylinders In Service	2
Feed Capacity (Lbs./Day)	1,000
Chlorine Contact Tanks	4
Dimensions	
Width	24
Length	100
Depth	10
Volume (Each)	180,000
Detention Time (Min.)(2008 Flow 23.3 MGD)	44.5
Boiler Building:	
Boiler Type	Weil-McLain
Capacity (BTU/hr.)	6,391,141
Burner Fuel (Dual)	Methane/#2 Fuel Oil
Burner Capacity	12,833 CFH Methane
	55 gph #2 Fuel Oil
Model	PGL-2394-WF
Settled Sewage Pump Station	
Variable Speed Pumps	2
Constant Speed Pumps	2
Hoffman Air Blowers	2
Pump Capacity (Per Pump)	15,000 gpm
Pump Station Capacity	86.4 MGD

EXHIBIT II

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Facilities Flow, MGD

PA 0027197

	Design		Actual 2008		Five Year Projection	
Location	Average	Peak	Average	Peak	Average	Peak
Conveyance:						
Paxton Creek	---	29.0	11.9	23.3	14.0	29.0
Asylum Run *	---	11.6	2.5	4.5	3.0	11.6
Paxton Creek Relief *	---	10.1	3.1	5.3	3.6	10.1
Front Street	---	19.0	3.3	7.7	3.9	19.0
Spring Creek	---	18.7	5.7	8.9	6.7	18.7
Hemlock Street	---	4.5	0.3	0.7	0.4	4.5
Pump Stations:						
Front Street	21.6	43.2	15.2	31.0	17.0	43.2
Spring Creek	10.0	28.9	6.0	9.7	6.7	28.9
Steelton	1.6	3.3	2.1	2.8	2.4	3.3
Treatment Plant	37.7	75.4	23.3	43.3	26.1	75.4

* Flow included in Paxton Creek

EXHIBIT III

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Conveyance System – 2008

Conveyance System	Size Range (Inches)	Approximate Length (Feet)	Division and Flow Regulators	Servicing Pump Station	Collection Systems Served
Interceptor:					
Spring Creek	18 - 34	11,500	No	Spring Creek	Harrisburg, Swatara, Paxtang, Susquehanna, Penbrook, Lower Paxton
Hemlock	8 - 24	3,800	Yes to Paxton Creek	Spring Creek	Harrisburg
Front Street	30 - 43	21,000	Yes to Susquehanna River	Front Street	Harrisburg, Susquehanna
Paxton Creek	48 - 60	14,000	Yes to Paxton Creek	Front Street	Harrisburg, Susquehanna, Lower Paxton, Penbrook
Paxton Creek Relief	48	4,900	No	Front Street	Harrisburg, Susquehanna, Lower Paxton, Penbrook
Asylum Run	15 - 24	8,200	No	Front Street	Harrisburg, Susquehanna, Lower Paxton, Penbrook
Total		63,400			
Force Main:					
Front Street	48	7,000	No	Front Street	Harrisburg, Susquehanna, Lower Paxton, Penbrook
Spring Creek	20	50	No	Spring Creek	Harrisburg, Swatara, Paxtang, Susquehanna, Penbrook, Lower Paxton
Total		7,050			
Collection System:	8 - 4'-7"x7'	696,960	No	Market Street, City Island I and II	City of Harrisburg owner comprised of 80% combined sewers, 20% sanitary sewers and 3,637 City inlets and 1,014 private inlets.

Raw Wastewater Average Concentration Characteristics in mg/l

Class *	pH	BOD	TSS	PO4	NH3-N	O/G	Cn	Ag	As	Cd	Cr	Cu	Hg	Mo	Ni	Pb	Se	Zn	PCB's
Residential	7.24	206	121	4.8	16.2	31	0.0004	0.0018	0.0001	0.0030	0.0030	0.0415	0.0000	0.0000	0.0021	0.0107	0.0000	0.3048	0.0063
Industrial	7.16	946	219	5.7	38.5	23	0.0019	0.0044	0.0024	0.0018	0.0044	0.1106	0.0000	–	0.0098	0.0168	<.0500	0.1561	<0.0050

* Wastewater flow characteristics breakout as follows: Residential is > 95% and Industrial is < 5%.

EXHIBIT IV

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Service Area Population Estimate[1]

Municipality	Population	Approximate Service Area, %	Population Served
City of Harrisburg	48,950	100	48,950
Borough of Paxtang	1,570	100	1,570
Borough of Steelton	5,858	100	5,858
Lower Paxton Township	44,424	66	29,320
Susquehanna Township	21,895	100	21,895
Swatara Township	22,610	50	11,305
Total Service Area Population			121,942

Land Type

Municipality	Land Type	Square Miles	Percent
City of Harrisburg	Land	7.8	66.1
	Water	4.0	33.9
Total		11.8	100.0

City of Harrisburg Account Type

Account Type	Number of Accounts	Percent
Residential	12,486	88.2
Commercial	1,240	8.8
Industrial	39	0.3
Public	379	2.7
Utility	12	0.1
Wholesale	2	0.1
Total	14,158	100.0

[1] Source: U.S. Census Bureau, Census 2000

EXHIBIT V

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

2008

NPDES Permit Limitations

July 1, 2008 thru June 30, 2013

Parameter	Quantity, lb/d		Concentration, mg/l		
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Instant Maximum
Flow	37.7	--------	----	----	----
5-Day CBOD	7,860	12,577	25	40	50
Total Suspended Solids	9,433	14,149	30	45	60
Total Phosphorus	629	--------	2.0	----	4.0
Dissolved Oxygen	5.0 mg/l minimum at all times				
Fecal Coliform	October 1 thru April 30			2,000/100 ml	Monthly Geometric Avg.
	May 1 thru September 30			200/100 ml	Monthly Geometric Avg.
pH	Within limits of 6.0 to 9.0 Standard Units at all times				
Nitrogen, Ammonia May 1 thru October 31	5,345	-------	17	----	34
November 1 thru April 30	*	-------	*	----	*
Nitrogen, Kjeldahl	*	-------	*	----	*
Nitrogen, Nitrate + Nitrite	*	-------	*	----	*
Nitrogen, Total	*	-------	*	----	*
Total Residual Chlorine	-------	-------	0.5	----	1.6

*Subject to monitoring requirements.

EXHIBIT VI

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Process Control - 2008

AWTF

Parameters	January	February	March	April	May	June	July	August	September	October	November	December	Average	NPDES Limits
Volume, MGD	21.3	31.6	34.2	23.7	28.3	20.5	19.3	15.6	19.3	17.4	17.3	31.3	23.3	37.7
Carbonaceous Biochemical Oxygen Demand														
Influent, mg/l	135	100	112	141	117	142	159	184	153	164	158	104	139	-----
Effluent, mg/l	8	9	10	10	8	9	6	6	8	7	7	7	8	25
Percent Removal, %	93.8	90.3	86.7	92.2	92.2	91.5	96.2	96.6	94.5	95.6	95.0	91.3	93.0	-----
Effluent Loading, lb/d	1,372	2,349	2,927	1,995	1,940	1,557	953	794	1,319	995	1,068	1,967	1,603	7,860
Suspended Solids:														
Influent, mg/l	124	104	110	142	117	166	173	204	158	195	150	98.1	145	-----
Effluent, mg/l	16	17	22	20	13	18	13	13	14	14	13	12	15	30
Percent Removal, %	85.6	81.4	74.7	85.2	87.6	88.7	92.1	93.3	90.6	92.3	90.7	85	87.3	-----
Effluent Loading, lb/d	2,867	4,487	6,513	3,879	3,050	3,091	2,049	1,709	2,284	2,087	1,893	3,339	3,104	9,433
Phosphorus:														
Influent, mg/l	3.3	2.5	2.6	3.5	2.8	4.0	4.5	5.1	4.1	4.6	3.8	2.6	3.6	-----
Effluent, mg/l	1.6	1.1	1.2	1.5	1.1	1.8	1.7	1.8	1.7	1.7	1.3	1.0	1.5	2.0
Percent Removal, %	51.4	54.8	45.0	56.5	59.6	53.7	61.2	62.3	57.4	60.7	65.2	58.9	57.2	-----
Effluent Loading, lb/d	276	281	328	288	247	304	269	242	267	245	183	240	264	629
pH:														
Effluent, Std. Units	6.9	6.9	6.9	6.9	6.9	7.0	7.0	7.2	7.1	7.2	7.2	7.1	7.0	6.0 - 9.0
Dissolved Oxygen:														
Effluent Minimum, mg/l	8.5	7.5	7.8	7.1	7.8	7.5	7.5	6.9	6.2	6.4	7.3	7.3	7.3	5.0 Min.
Fecal Coliform:														
Effluent, No./100 ml	45	97	134	29	11	4	2	4	5	17	19	39	34	200/100 ml (1)
Total Zinc														
Effluent, mg/l	*	0.05	*	*	0.06	*	0.03	*	*	*	*	0.04	0.05	0.10
Effluent Loading, lb/d		14.0			10.9		4.6					9.5	9.8	31.4
Nitrogen														
Total-N														
Effluent, mg/l	22	10	17	27	15	20	23	29	21	29	23	19	21	Monitor
Effluent Loading, lb/d	4,078	2,846	4,650	4,646	3,276	3,479	4,103	3,794	2,900	3,973	3,113	3,753	3,718	-----
NH3-N														
Effluent, mg/l	17	11	12	16	13	17	17	20	15	21	20	11	16	17 (2)
Effluent Loading, lb/d	3,071	2,702	2,952	3,092	2,925	2,941	2,728	2,543	2,321	3,013	2,864	2,531	2,807	4,716
Chlorine Resident:														
Effluent, mg/l	0.18	0.18	0.21	0.18	0.34	0.37	0.37	0.39	0.37	0.19	0.18	0.20	0.26	0.50

* Data not required every month.

(1) Seasonal limit 2,000/100 ml Oct. 1 to Apr. 30 and 200/100 ml May 1 to Sept. 30.

(2) Seasonal Limit May 1 to Nov. 1.

EXHIBIT VII

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

AWTF

Treatment Utility and Chemical Usage - 2008

Utility / Chemical	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Electric														
Total, kwH	1,088,700	899,300	1,093,500	984,000	905,900	993,400	882,900	858,300	977,900	890,200	1,009,600	976,000	963,308	11,559,700
Average, kwH/Day	35,119	31,010	35,274	32,800	29,223	33,113	28,481	27,687	32,597	28,716	33,653	31,484	31,596	379,157
Cost, Dollars	$66,551.52	$57,878.45	$65,676.96	$61,923.89	$56,782.56	$60,453.04	$55,467.33	$54,628.17	$59,101.67	$57,278.80	$61,531.28	$59,416.29	$59,724.16	$716,689.96
Fuel Oil														
Total, Gals.	0	500	0	0	0	5,899	0	0	0	0	0	0	533	6,399
Average, Gals./Day	0	17	0	0	0	197	0	0	0	0	0	0	18	214
Cost, Dollars	$0.00	$1,365.60	$0.00	$0.00	$0.00	$23,065.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$2,035.96	$24,431.52
Natural Gas														
Total, Cu Ft	1,077	781	739	465	385	71	5	3	4	30	301	513	365	4,374
Average, Cu Ft/Day	35	27	24	15	13	2	0	0	0	1	10	17	12	144
Cost, Dollars	$13,503.67	$15,293.42	$13,867.39	$5,728.92	$4,105.53	$1,020.08	$158.69	$143.66	$139.93	$366.78	$3,379.40	$6,202.44	$5,325.83	$63,909.91
Water														
Total, Gal.	1,252,000	1,481,000	1,901,000	3,195,000	1,362,000	1,683,000	1,138,000	1,216,000	2,150,000	1,253,000	1,581,000	825,000	1,586,417	19,037,000
Average, Gal./Day	40,387	51,069	61,323	106,500	43,935	56,100	36,710	39,226	71,667	40,419	52,700	26,613	52,221	626,649
Cost, Dollars	$9,337.58	$10,654.33	$13,069.33	$20,509.83	$10,435.83	$11,815.83	$8,682.08	$9,130.58	$14,501.08	$9,343.33	$11,229.33	$6,882.33	$11,299.29	$135,591.46
Chlorine Disinfection														
Total, Lbs.	4,610	5,590	7,640	4,895	8,070	8,300	7,730	7,360	7,375	4,630	3,620	6,110	6,328	75,930
Average, Lbs./Day	144	193	240	163	260	268	249	237	246	149	121	197	206	2,467
Avg Residual, mg/l	0.18	0.18	0.21	0.18	0.36	0.38	0.37	0.39	0.37	0.19	0.18	0.20	0.27	3.19
Cost, $/Lbs.	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	
Total Cost, Dollars	$1,678.04	$2,034.76	$2,780.96	$1,781.78	$2,937.48	$3,021.20	$2,813.72	$2,679.04	$2,684.50	$1,685.32	$1,317.68	$2,224.04	$2,303.21	$27,638.52
Phosphorous Removal														
Total FeSO4, Gals.	17,738	17,028	16,233	23,779	19,114	19,436	18,641	30,552	13,825	32,164	26,273	14,513	20,775	249,296
Avg FeSO4, Gals./Day	572	587	524	793	617	648	601	986	461	1,038	876	468	681	8,171
FeSO4 Cost, $/Gal.	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	
FeSO4 Total Cost, Dollars	$6,438.89	$6,181.16	$5,892.58	$8,631.78	$6,938.38	$7,055.27	$6,766.68	$11,090.38	$5,018.48	$11,675.53	$9,537.10	$5,268.22	$7,541.20	$90,494.45

EXHIBIT VIII

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Conveyance Utility Usage - 2008

Location Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Front Street Pump Station														
Electric														
Total, kwH	97,200	102,600	121,800	164,400	97,200	114,000	90,000	82,200	64,800	68,400	69,600	77,400	95,800	1,149,600
Average, kwH Day	3,135	3,538	3,929	5,480	3,135	3,800	2,903	2,652	2,160	22,106	2,320	2,496.77	4,805	57,656
Cost, Dollars	$9,879.35	$8,590.48	$12,946.02	$14,147.71	$10,583.50	$10,725.43	$9,251.67	$8,449.45	$6,756.57	$8,320.61	$8,034.72	$8,497.82	$9,681.78	$116,181.33
Fuel Oil														
Total, Gals.	0	2,000	0	0	0	3,743	0	0	0	0	0	0	479	5,743
Average, Gals. Day	0	69	0	0	0	125	0	0	0	0	0	0	16	194
Cost, Dollars	$0.00	$5,462.40	$0.00	$0.00	$0.00	$14,634.31	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,674.73	$20,096.71
Water														
Total, Gals.	45,000	50,000	125,000	115,000	40,000	100,000	20,000	10,000	10,000	20,000	100,000	110,000	62,083	745,000
Average, Gal. Day	1,452	1,724	4,032	3,833	1,290	3,333	645	323	333	645	3,333	3,548	2,041	24,492
Cost, Dollars	$704.00	$733.03	$1,164.28	$1,106.78	$675.53	$1,020.53	$560.53	$503.03	$503.03	$560.53	$1,020.53	$1,078.03	$802.49	$9,629.83
Spring Creek Pump Station														
Electric														
Total, kwH	41,600	50,800	**	121,600	45,760	52,480	36,480	31,680	37,760	33,920	38,080	40,960	48,284	$31,120
Average, kwH Day	1,342	1,752	**	4,053	1,476	1,749	1,177	1,022	1,259	1,094	1,269	1,321	1,592	17,514
Cost, Dollars	$4,274.74	$6,481.05	**	$9,071.18	$3,958.46	$4,972.69	$4,118.02	$2,515.92	$3,172.00	$2,540.59	$3,041.20	$3,546.08	$4,335.63	$47,691.93
Fuel Oil														
Total, Gals.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average, Gals. Day	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost, Dollars	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Water														
Total, Gals.	135,000	192,000	174,000	161,000	186,000	185,000	178,000	206,000	86,000	68,000	63,000	51,000	140,417	1,685,000
Average, Gal. Day	4,355	6,621	5,613	5,367	6,000	6,166	5,742	6,645	2,867	2,193	2,100	1,645	4609	55,313
Cost, Dollars	$824.86	$1,152.61	$1,049.11	$974.36	$1,118.11	$1,112.36	$1,072.11	$1,233.11	$545.11	$439.61	$410.86	$341.86	$856.01	$10,272.07
Market Street Pump Station														
Electric														
Total, kwH	16,800	14,280	15,000	14,160	8,640	7,800	6,600	6,360	5,280	4,560	6,840	10,440	9,730	116,760
Average, kwH Day	542	429	484	472	279	260	213	205	176	147	228	337	314	3,772
Cost,Dollars	$1,212.44	$1,100.08	$1,255.12	$1,081.39	$1,261.62	$782.54	$814.00	$715.86	$577.05	$532.74	$659.07	$843.00	$902.91	$10,834.91
Fuel Oil														
Total, Gals.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average, Gals. Day	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost, Dollars	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
City Island Pump Station														
Electric														
Total, kwH	400	240	400	160	120	200	240	240	240	240	240	1,000	310	3,720
Average, kwH Day	13	8	13	5	4	7	8	8	8	8	8	32	10	122
Cost, Dollars	$74.04	$38.40	$56.75	$29.24	$26.88	$36.03	$40.60	$40.60	$40.60	$40.60	$40.60	$117.08	$48.45	$581.42

** Data included in following month of April

EXHIBIT IX

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Sludge Handling Information - 2008

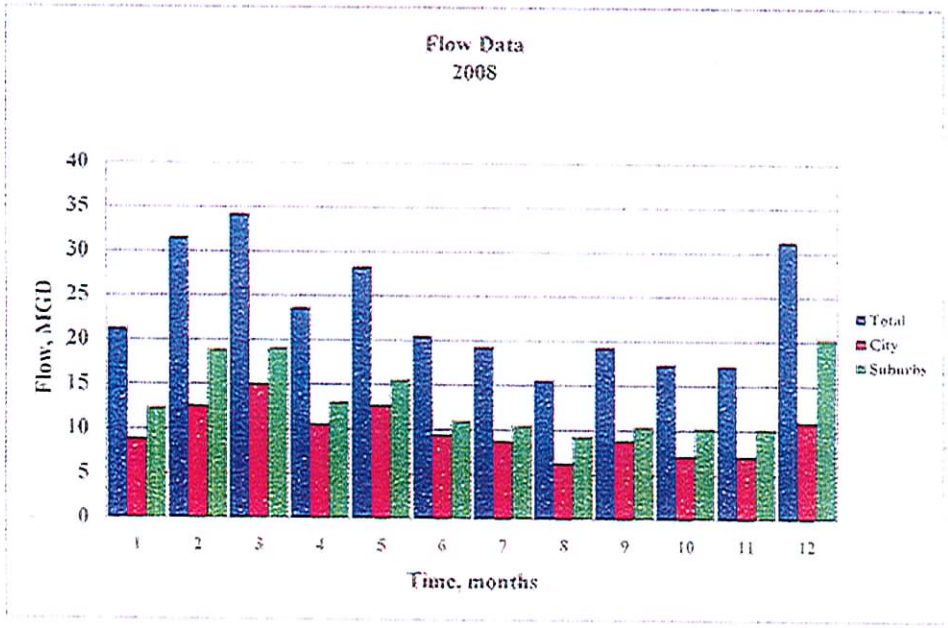
Process	January	February	March	April	May	June	July	August	September	October	November	December	Average
Solids Removal													
Process, Lbs.	903,757	1,005,427	1,200,609	1,189,571	1,194,967	1,071,060	1,276,152	1,308,534	1,025,312	1,172,260	1,047,581	1,098,302	1,124,461
CWH Program, Lbs.	190,660	223,380	213,700	208,680	123,700	248,820	308,240	228,920	114,040	293,520	73,140	193,020	201,652
Total Solids, Lbs.	1,094,417	1,228,807	1,414,309	1,398,251	1,318,667	1,319,880	1,584,392	1,537,454	1,139,352	1,465,780	1,120,721	1,291,322	1,326,113
Sludge Dewatering													
Feed Volume, Gals.	4,070,000	2,738,000	4,038,000	3,991,000	3,433,000	3,464,000	5,514,000	6,442,000	4,058,000	6,600,000	3,612,000	3,210,000	4,264,167
Feed Solids, %	2.1	2.1	2.5	2.5	2.6	2.2	2.3	2.2	2.6	2.3	2.5	2.9	2.4
Labor, Hours	457	333	392	437	386	368	482	498	345	468	320	372	405
Operations, Hours	782	533	750	861	741	733	926	976	594	892	626	682.9	758
Total Cake, Dry Tons	211	148	255	251	203	188	307	293	205	255	184	198	225
Total Cake, Wet Tons	1,148	818	1,340	1,337	1,089	1,035	1,738	1,641	1,098	1,494	1,029	1,080	1,237
Cake TS, %	18.3	17.9	19.1	18.9	19.0	18.2	17.6	18.0	18.6	18.0	17.9	18.4	18.3
Press Rate, Lbs./Hour	2,937	3,069	3,573	3,106	2,938	2,823	3,753	3,363	3,696	3,349	3,288	3,163	3,255
Polymer Dosage, Lbs	6,250	4,950	7,350	8,550	7,400	7,950	10,400	9,600	6,200	8,450	6,650	6,700	7,538
Polymer Dosage, Lbs/Dry Ton	29.7	33.4	28.9	34.1	36.5	42.4	33.9	32.8	30.2	33.2	36.1	33.8	33.7
Disposal Cost													
Labor, Dollars	$8,781.62	$6,400.26	$7,528.47	$8,399.14	$7,418.92	$7,078.73	$9,262.12	$9,571.56	$6,630.90	$8,985.35	$6,150.40	$7,151.76	$7,779.94
Electrical,Dollars	$344.04	$234.52	$330.04	$378.84	$326.08	$322.70	$407.48	$429.44	$261.40	$392.48	$275.40	$300.48	$333.58
Polymer, Dollars	$10,937.50	$8,662.50	$12,862.50	$14,962.50	$12,950.00	$13,912.50	$18,200.00	$16,800.00	$10,850.00	$14,787.50	$11,637.50	$11,725.00	$13,190.63
Disposal, Dollars	$45,669.00	$27,123.00	$50,287.00	$36,644.00	$18,789.00	$12,879.00	$24,036.00	$24,819.00	$15,116.00	$20,323.00	$17,385.19	$51,050.00	$28,676.68
Total Cost, Dollars	$65,732.15	$42,420.28	$71,008.02	$60,384.48	$39,484.00	$34,192.92	$51,905.60	$51,620.00	$32,858.30	$44,488.33	$35,448.49	$70,227.24	$49,980.82
Cost Per Dry Ton, Dollars	$311.97	$286.62	$279.01	$240.58	$194.79	$182.17	$169.07	$176.18	$160.28	$174.60	$192.65	$354.68	$226.88

EXHIBIT X

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Flow Monitoring Information, MGD - 2008

Month	Total Flow	City	Suburbs	City Regions 1	2	3	4	5	Suburb Regions 6	7	8	9	10	Total Precip inches
January	21.300	8.944	12.356	6.941	0.141	0.242	1.432	0.188	2.002	3.282	1.973	4.789	0.310	1.550
February	31.600	12.638	18.962	9.753	0.536	0.368	1.473	0.508	2.396	5.576	2.655	7.889	0.446	4.170
March	34.240	15.091	19.149	11.428	0.069	0.295	2.721	0.578	2.783	4.986	3.215	7.319	0.855	4.760
April	23.700	10.607	13.093	8.293	0.183	0.296	1.521	0.314	2.179	3.781	2.152	4.606	0.575	4.300
May	28.300	12.730	15.570	11.476	0.138	0.321	0.644	0.251	2.340	4.605	2.667	5.547	0.411	5.300
June	20.500	9.487	11.013	7.213	0.182	0.244	1.706	0.142	2.044	3.066	1.774	3.800	0.329	2.880
July	19.300	8.795	10.505	7.348	0.069	0.218	1.001	0.159	1.952	3.031	1.810	3.470	0.242	3.220
August	15.600	6.295	9.305	4.278	0.044	0.188	1.632	0.153	1.750	2.729	1.871	2.766	0.189	1.790
September	19.300	8.895	10.405	6.090	0.112	0.177	2.365	0.151	1.870	2.595	1.846	3.808	0.286	5.000
October	17.400	7.144	10.256	5.476	0.182	0.138	1.149	0.199	1.836	3.172	1.990	3.126	0.132	2.560
November	17.300	7.098	10.202	5.609	0.184	0.136	0.941	0.228	1.758	3.201	1.894	3.193	0.126	2.710
December	31.300	11.900	20.300	7.651	0.331	0.227	2.324	0.467	2.446	5.284	4.517	7.775	0.278	7.620
Average	23.32	9.89	13.43											3.82
Percent	100.00	42.43	57.57											45.80



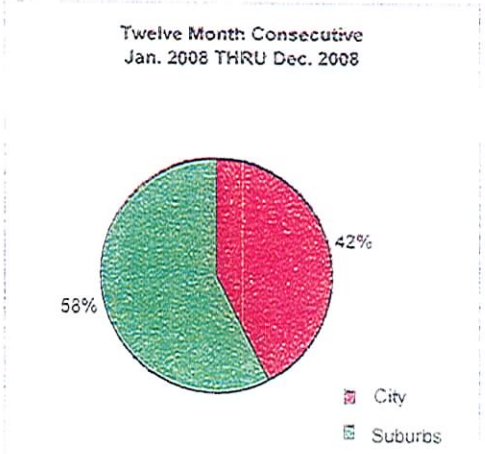


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Exhibit XI
CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

	Jan - Dec 08	Budget	$ Over Bud...
Income			
2900 · Income			
350 · Interest Income			
350000 · Savings Account - Treatment	4.07	4,000.00	-3,995.93
350002 · Interest Savings - Con/Treat	13,829.65	26,000.00	-12,170.35
350003 · Interest Savings - Collection	2,769.98	5,200.00	-2,430.02
352002 · Interest Other - Con/Treat	22,364.70	100.00	22,264.70
352003 · Interest Other-Collection	5,013.15	100.00	4,913.15
Total 350 · Interest Income	43,981.55	35,400.00	8,581.55
358 · Gain on Sale of..			
358090 · Sale of Assets	3,100.00	0.00	3,100.00
Total 358 · Gain on Sale of..	3,100.00	0.00	3,100.00
369 · Sewerage Utility Fund			
369002 · Conveyance/Treatment Revenue	5,404,722.53	5,162,500.00	242,222.53
369003 · Collection System Revenue	963,153.34	1,036,200.00	-73,046.66
369005 · Sales of Scrap	899.00	300.00	599.00
369008 · Sales to Public Authorities	8,215,085.66	7,847,700.00	367,385.66
369010 · Sludge Handling Charges	593,316.30	350,000.00	243,316.30
369011 · Sales of Electric Power	102,960.00	120,000.00	-17,040.00
369012 · Contract Waste Hauling Charges	1,850.00	1,900.00	-50.00
369013 · Pretreatment Charges	7,700.00	4,500.00	3,200.00
369014 · Contract Waste Hauling Lab Fees	29,211.50	20,000.00	9,211.50
369015 · Pretreatment Lab Fees	20,371.75	18,500.00	1,871.75
369053 · Liens Principal - Convey/Treat	62,381.41	86,000.00	-23,618.59
369054 · Liens Interest - Convey/Treat	17,850.38	13,000.00	4,850.38
369055 · Liens Principal - Collection	12,569.46	12,700.00	-130.54
369056 · Liens Interest - Collection	3,559.65	3,000.00	559.65
Total 369 · Sewerage Utility Fund	15,435,630.98	14,676,300.00	759,330.98
385000 · Refund of Expenditures	0.00	50,000.00	-50,000.00
385090 · Sewer Rev Misc.	330.75	0.00	330.75
Total 2900 · Income	15,483,043.28	14,761,700.00	721,343.28
Total Income	15,483,043.28	14,761,700.00	721,343.28
Gross Profit	15,483,043.28	14,761,700.00	721,343.28
Expense			
2910 · Administration			
414 · Salaries and Wages			
1414000 · Wages - Hourly Employees	246,761.96	257,106.20	-10,344.24
1416000 · Overtime	39.09	39.09	0.00
1417000 · Sick Leave Buyback	244.13	2,400.00	-2,155.87
Total 414 · Salaries and Wages	247,045.18	259,545.29	-12,500.11
419 · Fringe Benefits			
1419001 · Social Security	18,898.89	23,156.00	-4,257.11
1419002 · Blue Cross/Shield	80,399.26	84,796.00	-4,396.74
1419003 · Group Life Insurance	798.00	17,048.00	-16,250.00
1419004 · Prescription Drug Expense	25,584.45	25,584.45	0.00
1419005 · Severance Pay	0.00	3,000.00	-3,000.00
1419008 · Dental	3,968.57	5,082.00	-1,113.43
1419009 · Vision Insurance	566.32	566.32	0.00
1419010 · Unemployment	0.00	11,000.00	-11,000.00
1419011 · Workers' Compensation	0.00	2,000.00	-2,000.00
1419012 · Loss Time / Medical @ WC	37,964.37	51,000.00	-13,035.63
1419014 · State Fees @ Workers' Comp.	0.00	1,300.00	-1,300.00
1419015 · Excess Insurance Policy @ WC	0.00	4,000.00	-4,000.00
Total 419 · Fringe Benefits	168,179.86	228,532.77	-60,352.91

Exhibit XI
CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

	Jan - Dec 08	Budget	$ Over Bud...
420 · Communications			
1420010 · Advertising & Public Notices	423.23	1,053.00	-629.77
1420020 · Printing Reproducing & Report	6,959.68	6,959.68	0.00
1420040 · Telephone	15,878.61	20,496.68	-4,618.07
1420050 · Postage	1,417.19	1,417.19	0.00
Total 420 · Communications	24,678.71	29,926.55	-5,247.84
421 · Professional Fees			
1421020 · Audit Fees	21,910.78	22,100.00	-189.22
1421030 · Consulting	39,128.95	47,699.79	-8,570.84
1421040 · Collection	1,046.37	3,500.00	-2,453.63
1421060 · Professional Fees/Other	5,935.00	5,935.00	0.00
Total 421 · Professional Fees	68,021.10	79,234.79	-11,213.69
423 · Insurance			
1423002 · Stop/Loss Premium	24,597.05	24,597.05	0.00
1423010 · Automobile	16,276.96	16,276.96	0.00
1423011 · Auto Insurance Deductible	25,500.00	25,500.00	0.00
1423020 · General Liability	46,697.45	52,500.00	-5,802.55
1423040 · Property	75,794.94	85,200.00	-9,405.06
1423041 · Property Deductible	0.00	10,000.00	-10,000.00
1423050 · Inland Marine	26,048.74	29,300.00	-3,251.26
1423060 · Flood (Property & Crime)	86,495.00	86,495.00	0.00
1423090 · Public Official Liability	0.00	5,100.00	-5,100.00
1423095 · Excess Liability	11,148.79	12,600.00	-1,451.21
1423097 · Terrorism	5,029.52	5,700.00	-670.48
Total 423 · Insurance	317,588.45	353,269.01	-35,680.56
425 · Maintenance			
1425090 · Maintenance Service Contract	47,133.36	58,000.00	-10,866.64
Total 425 · Maintenance	47,133.36	58,000.00	-10,866.64
429 · Other Contracted Services			
1429001 · Tuition for Employee Training	260.00	1,000.00	-740.00
1429003 · Interfund - General Admin.	2,758,320.00	2,758,320.00	0.00
1429009 · Pension Fund Admin. Charge	262.14	262.14	0.00
1429012 · Laundry & Dry Clean	9,465.04	11,512.05	-2,047.01
1429015 · Travel	135.00	135.00	0.00
1429016 · Conferences	110.48	110.48	0.00
1429017 · Membership Dues	122.00	122.00	0.00
1429025 · CAT Event Disaster Recovery	9,583.56	12,543.96	-2,960.40
1429095 · Bank Service Charge	5,085.17	5,085.17	0.00
Total 429 · Other Contracted Services	2,783,343.39	2,789,090.80	-5,747.41
430 · Supplies and Expenses			
1430002 · Software & Licenses	16,105.19	18,000.00	-1,894.81
1430003 · Subscriptions, Periodicals	58.00	325.00	-267.00
1430008 · Data Processing Supplies	425.86	498.00	-72.14
1430009 · Office Supplies	7,116.38	7,116.38	0.00
Total 430 · Supplies and Expenses	23,705.43	25,939.38	-2,233.95
447 · Interest Debt Service Pension			
1447030 · General Obligation Serial Bond	26,482.60	26,504.00	-21.40
Total 447 · Interest Debt Service Pension	26,482.60	26,504.00	-21.40
448 · Principal Debt Service Pension			
1448030 · General Obligation Serial Bonds	21,184.21	21,184.21	0.00
Total 448 · Principal Debt Service Pension	21,184.21	21,184.21	0.00

Exhibit XI
CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

	Jan - Dec 08	Budget	$ Over Bud...
449 · Authority Payments			
1449030 · Transfer To Authority - Rental	1,912,421.52	1,954,342.00	-41,920.48
1449031 · Pennvest	235,025.17	235,025.17	0.00
Total 449 · Authority Payments	2,147,446.69	2,189,367.17	-41,920.48
Total 2910 · Administration	5,874,808.98	6,060,593.97	-185,784.99
2920 · Operations			
414. · Salaries and Wages - Operations			
2414000 · Wages-Hourly Employees	801,751.07	812,682.00	-10,930.93
2416000 · Overtime	154,935.86	154,935.86	0.00
Total 414. · Salaries and Wages - Operations	956,686.93	967,617.86	-10,930.93
419. · Fringe Benefits			
2419001 · Social Security	73,186.59	73,645.00	-458.41
2419002 · Blue Cross/Blue Shield	103,713.76	129,995.96	-26,282.20
2419003 · Group Life Insurance	3,032.40	3,040.00	-7.60
2419004 · Prescription Drug Expense	45,309.63	51,029.00	-5,719.37
2419008 · Dental	12,196.81	14,787.00	-2,590.19
2419009 · Vision Insurance	1,252.10	1,252.10	0.00
Total 419. · Fringe Benefits	238,691.29	273,749.06	-35,057.77
422 · Utilities and Service			
2422010 · Water	145,164.79	149,592.00	-4,427.21
2422020 · Electricity	730,747.57	730,747.57	0.00
2422030 · Heat	108,439.86	167,169.17	-58,729.31
2422090 · Garbage & Refuse Removal	452,146.65	619,027.94	-166,881.29
Total 422 · Utilities and Service	1,436,498.87	1,666,536.68	-230,037.81
424 · Rental			
2424060 · Other	1,137.00	1,137.00	0.00
Total 424 · Rental	1,137.00	1,137.00	0.00
425. · Maintenance and Repairs			
2425080 · Service Contracts	157,443.22	161,808.00	-4,364.78
2425090 · Maintanance Service Contract	500.00	500.00	0.00
2425099 · Other Contracted Maint & Repair	29,054.80	31,518.83	-2,464.03
Total 425. · Maintenance and Repairs	186,998.02	193,826.83	-6,828.81
429. · Contracted Services			
2429003 · General Admin. Charges	2,671,336.00	2,671,336.00	0.00
2429012 · Laundry & Dry Cleaning	2,005.12	2,005.12	0.00
2429015 · Travel	300.00	300.00	0.00
2429016 · Conferences	453.87	453.87	0.00
2429017 · Member's Dues	137.00	137.00	0.00
Total 429. · Contracted Services	2,674,231.99	2,674,231.99	0.00
430. · Supplies and Expenses			
2430011 · Custodial Supplies	6,672.18	6,672.18	0.00
2430012 · Personnel Safety Supplies	1,935.33	1,935.33	0.00
2430016 · Medical Surgical & Lab Supplies	72,514.79	75,888.00	-3,373.21
2430037 · Chemicals	310,400.97	341,081.40	-30,680.43
2430055 · Mechanical Equip Parts	574.43	574.43	0.00
Total 430. · Supplies and Expenses	392,097.70	426,151.34	-34,053.64
453. · Capital Expense			
2453000 · Operations Equipment	6,479.75	15,000.00	-8,520.25
Total 453. · Capital Expense	6,479.75	15,000.00	-8,520.25
Total 2920 · Operations	5,892,821.55	6,218,250.76	-325,429.21

Exhibit XI
CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

	Jan - Dec 08	Budget	$ Over Bud...
2930 · Maintenance			
414.. · Wages and Salary			
3414000 · Wages-Hourly Employees	407,454.14	407,454.14	0.00
3416000 · Overtime	5,970.55	5,970.55	0.00
Total 414.. · Wages and Salary	413,424.69	413,424.69	0.00
419.. · Fringe Benefits			
3419001 · Social Security	31,626.98	31,626.98	0.00
3419002 · Blue Cross/Blue Shield	60,566.84	82,764.00	-22,197.16
3419003 · Group Life Insurance	1,436.40	1,440.00	-3.60
3419004 · Prescription Drug Expense	22,512.25	24,155.00	-1,642.75
3419008 · Dental	6,039.52	7,003.00	-963.48
3419009 · Vision Insurance	633.89	633.89	0.00
Total 419.. · Fringe Benefits	122,815.88	147,622.87	-24,806.99
425.. · Maintenance and Repairs			
3425010 · Vehicle Equipment	12,819.70	13,027.00	-207.30
3425060 · Operations Equipment	6,236.69	6,236.69	0.00
Total 425.. · Maintenance and Repairs	19,056.39	19,263.69	-207.30
429.. · Contracted Service			
3429003 · General Admin. Charges	506,835.00	506,835.00	0.00
3429012 · Laundry & Dry Cleaning	0.00	0.00	0.00
3429015 · Travel	0.00	300.00	-300.00
3429016 · Conference Registration	350.00	560.00	-210.00
3429017 · Member's Dues	85.00	85.00	0.00
3429090 · Miscellaneous	2,724.00	3,610.00	-886.00
Total 429.. · Contracted Service	509,994.00	511,390.00	-1,396.00
430.. · Supplies and Expenses			
3430036 · Building & Construction Supplie	5,808.19	5,808.19	0.00
3430040 · Botanical	119.89	119.89	0.00
3430042 · Expendable Tools & Hardware	8,286.51	8,286.51	0.00
3430045 · Utility Plant, Fuels, Lubricant	6,326.28	7,332.00	-1,005.72
3430050 · Motor Fuels & Lubricants	24,144.42	24,840.19	-695.77
3430051 · Tires & Batteries	3,511.23	3,511.23	0.00
3430052 · Vehicle Parts & Supplies	10,954.32	10,954.32	0.00
3430055 · Mechanical Equipmt-Parts & Supp	175,598.19	183,700.00	-8,101.81
3430057 · Pipe Connection Etc	20,530.55	20,530.55	0.00
3430099 · Misc. Supplies & Expenses	16,033.63	16,033.63	0.00
3439070 · Plant Equipment	618.11	12,700.00	-12,081.89
Total 430.. · Supplies and Expenses	271,931.32	293,816.51	-21,885.19
457.. · Sewer Plant Equipment			
3457000 · Plant Equipment	91,235.94	91,235.94	0.00
Total 457.. · Sewer Plant Equipment	91,235.94	91,235.94	0.00
Total 2930 · Maintenance	1,428,458.22	1,476,753.70	-48,295.48
2940 · Field Maintenance			
414... · Wages and Salary - Fd. Main.			
4414000 · Wages Hourly Employees	199,133.95	207,665.00	-8,531.05
4416000 · Overtime	15,217.26	18,957.00	-3,739.74
Total 414... · Wages and Salary - Fd. Main.	214,351.21	226,622.00	-12,270.79
419... · Fringe Benefits			
4419001 · Social Security	16,397.88	17,336.00	-938.12
4419002 · Blue Cross/Blue Shield	30,494.50	45,980.00	-15,485.50
4419003 · Group Life Insurance	758.10	800.00	-41.90
4419004 · Prescription Drug Expense	12,223.22	13,595.00	-1,371.78
4419008 · Dental	3,183.06	3,905.00	-721.94
4419009 · Vision Insurance	321.10	321.10	0.00
Total 419... · Fringe Benefits	63,377.86	81,937.10	-18,559.24

Exhibit XI
CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

	Jan - Dec 08	Budget	$ Over Bud...
420... · Printing & Reproduction			
4420020 · Printing Repro & Report	0.00	1,000.00	-1,000.00
Total 420... · Printing & Reproduction	0.00	1,000.00	-1,000.00
422.. · Utilities			
4422010 · Water	21,037.54	21,037.54	0.00
4422020 · Electricity	161,546.59	170,111.00	-8,564.41
4422030 · Heat	0.00	1,304.23	-1,304.23
4422090 · Garbage and Refuse	4,779.09	12,960.00	-8,180.91
Total 422.. · Utilities	187,363.22	205,412.77	-18,049.55
425... · Maintenance and Repairs			
4425010 · Vehicular Equipment	6,363.60	6,772.89	-409.29
4425099 · Other Contracted Maint/Repairs	81,475.45	8,742.91	72,732.54
Total 425... · Maintenance and Repairs	87,839.05	15,515.80	72,323.25
429... · Contracted Services			
4429003 · General Admin. Charges	310,296.46	383,029.00	-72,732.54
4429012 · Laundry & Dry Clearning	0.00	0.00	0.00
Total 429... · Contracted Services	310,296.46	383,029.00	-72,732.54
430... · Supplies and Expenses			
4430006 · Photography	0.00	50.00	-50.00
4430012 · Personal Safety Supplies	207.65	250.00	-42.35
4430037 · Chemicals	175.00	500.00	-325.00
4430042 · Tools & Hardware	671.74	671.74	0.00
4430050 · Motor Fuels/Lubricants	5,004.93	5,018.08	-13.15
4430051 · Tires & Batteries	427.83	427.83	0.00
4430052 · Vehicle Parts & Supplies	4,240.08	4,367.56	-127.48
4430055 · Mechanical Equipment P & S	48,561.61	48,535.63	25.98
Total 430... · Supplies and Expenses	59,288.84	59,820.84	-532.00
453.... · Equipment			
4453090 · Sewer Field Maint. Other Cap	0.00	32,764.06	-32,764.06
Total 453.... · Equipment	0.00	32,764.06	-32,764.06
Total 2940 · Field Maintenance	922,516.64	1,006,101.57	-83,584.93
Total Expense	14,118,605.39	14,761,700.00	-643,094.61
Net Income	1,364,437.89	0.00	1,364,437.89

EXHIBIT XII

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

LABORATORY

APG Quality Assurance Program Review - 2008

Tested Parameter	NPDES Analysis	Average Recovery	US EPA Control Limits	Average % Recovery	% Analysis Beyond Limit
BOD5	No	35.8	13.6 - 53.3	108.8	0.0
CBOD5	Yes	35.4	8.78 - 52.8	114.7	0.0
Suspended Solids	Yes	39.7	31.0 - 48.0	96.3	0.0
Phosphorus,Total	Yes	2.33	1.78 - 2.71	105.0	0.0
pH	Yes	6.21	5.95 - 6.38	100.4	0.0
Ammonia-Nitrogen	Yes	1.76	1.24 - 2.53	96.2	0.0
Residual Chlorine	Yes	1.51	1.03 - 1.17	105.5	0.0
Fecal Coliform	Yes	460	88 - 4080	33.8	0.0

EXHIBIT XIII

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

LABORATORY

EPA-DMR Quality Assurance Evaluation - 2008

Tested Parameter	Required Analysis	AWTF Results	US EPA Value	Percent Recovery	Acceptance Limits	Acceptable Performance
Carbonaceous BOD5	Yes	138.8	118.0	117.6	52.9 - 183	Yes
BOD5	No	139.2	138.0	100.9	69.9 - 206	Yes
Suspended Solids	Yes	81.5	81.5	100.0	66.6 - 90.7	Yes
Phosphorus,Total	Yes	2.46	2.36	104.2	1.90 - 2.87	Yes
pH	Yes	6.41	6.46	99.2	6.26 - 66.6	Yes
Ammonia-Nitrogen	Yes	7.57	7.55	100.3	5.55 - 9.51	Yes
Residual Chlorine	Yes	1.00	0.93	107.5	0.67 - 1.16	Yes
Fecal Coliform	Yes	300	1230	24.4	114 - 2470	Yes

EXHIBIT XIV

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Pretreatment Performance Summary

I. General Information

Control Authority Name: City of Harrisburg
Address: 1662 South Cameron Street
City: Harrisburg State: Pennsylvania Zip: 17104
Contact Person: Michael A. Deily
Contact Title: Superintendent
Contact Telephone Number: (717) 939-7275
NPDES No.: PA0027197
Reporting Period: January 1 - December 31, 2008
Total Categorical IUs (CIUs): 3
Total "Middle Tier" CIUs (MTCIUs): 0
Total Nonsignificant CIUs (NSCIUs): 0
Total Significant Noncategorical IUs (SNIUs): 7

II. Significant Industrial User Compliance

1. No. of SIUs With Current Control Documents	10
2. No. of SIU Facilities Inspected	10
3. No. of SIU Facilities Sampled	10
4. No. of SIUs Submitting Self-Monitoring Reports	9 (1)

III. Significant Industrial User Compliance

1. No. of SIUs Violating a Compliance Schedule/No. on a Schedule	0
2. No. of SIUs in SNC for the July to December Period	0
3. No. of SIUs in SNC At Any Time During Calendar Year	0
4. No. of SIUs in SNC That Were Also in SNC During the Previous Calendar Year	0
5. No. of NSCIUs that violated any standards or requirements	0

IV. Enforcement Actions

1. Notices/Letters of Violation Issued to SIUs	3
2. Enforceable Compliance Schedules Issued to SIUs	0
3. Civil/Criminal Suits Filed	0
4. No. of SIUs From Which Penalties Have Been Collected	0
5. Other Actions (sewer bans, etc.)	0

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge. (See Part B.V of the instructions)

Michael A. Deily	Superintendent
Name of Authorized Representative (Print)	Title (Print)
	March 5, 2009
Signature	Date

(1) In lieu of quarterly self monitoring, the City opted to perform quarterly compliance sampling at the New Morgan Municipal Authority.

EXHIBIT XV

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

INDUSTRIAL WASTE PRETREATMENT PROGRAM

AWTF

Regulated Industrial Users - 2008

Industrial User	Class	SIC	Category	BMR (1) Submittal	Permit Number	Permit Issued	Permit Expir.	90-Day (2) Compliance Report Rec'd	Inspection Facility	Inspection Self Mon.	Sampling Compliance	Sampling Self Mon.
Ames True Temper Incorporated 1500 South Cameron Street, Hbg., Pa 17104	C	3799	Metal Finishing	05/21/04	062509-6	06/26/04	06/25/09	09/24/04 (b)	1	1	6	12
Turbine Airfoil Designs, Inc. (3) 1400 North Cameron Street, Hbg., Pa 17103	C	3724	Metal Finishing	06/23/04	062709-7	10/26/04 (4)	06/27/09	01/19/05 (b)	1	1	6	12
Electronic Service & Design Corporation 5885 Grayson Road, Hbg., Pa 17111	C	3679	Metal Finishing	06/21/06	062611-10	06/27/06	06/26/11	07/20/06 (b)	1	1	6	12
Harrisburg Dairies, Inc. 20th and Herr Streets, Hbg., Pa 17103	NC	2020	High Load Conv.	08/13/04	082109-13	08/22/04	08/21/09	10/20/04 (b)	1	1	10	4
HMERRF (001/002/003) (5) 1670 South 19th Street, Hbg., Pa 17104	NC	4953	High Load Metals	12/20/07	122012-9	12/21/07 (6)	12/20/12	08/14/06 (c)	1	1	10	21
Hershey Creamery Company 301 South Cameron Street, Hbg., Pa 17101	NC	2024	High Load Conv.	07/09/04	072309-8	07/24/04	07/23/09	10/12/04 (b)	1	1	9	23
New Morgan Municipal Authority 909 Elmerton Avenue, Hbg., Pa 17110	NC	4953	High Load Metals	03/18/05	040610-21	04/07/05	04/06/10	07/06/05 (b)	1	1	4	0 (7)
Norfolk Southern Railway Company 3322 Industrial Road, Hbg., Pa 17110	NC	4011	High Load Conv.	05/23/08	081913-11	08/20/08	08/19/13	10/27/08 (b)	1	1	6	4
Stroehmann Bakeries, Inc. 3996 Paxton Street, Hbg., Pa 17111	NC	2051	High Load Conv.	08/19/04	082209-14	08/23/04	08/22/09	12/03/04 (b)	1	1	6	5
Swatara Township Landfill 599 Eisenhower Boulevard, Hbg., Pa 17111	NC	4953	High Load Metals	02/27/08	031613-17	03/17/08	03/16/13	06/14/08 (b) (8)	1	1	2	4

Notes:
(1) All industrial users are required to update their BMR's prior to permit issuance or reissuance. The date indicated represents the most recent submittal.
(2) All industrial users are required to submit a 90-day compliance report upon industrial user permit: (a) issuance, (b) reissuance or (c) amendment. The date indicated represents the most recent submittal.
(3) Industrial user meets the MTC criteria, however, has not been permitted as such.
(4) Industrial user permit was administratively extended to 10/25/04 in order to resolve an issue pertaining to their Metal Finishing categorization. In the interim, the company was sold to Turbine Airfoil Designs, Inc.
(5) Harrisburg Materials, Energy, Recycling and Recovery Facility
(6) Industrial user permit was reissued to The Harrisburg Authority and new contract operator on 12/21/07.
(7) In lieu of quarterly self monitoring, the City elected to perform quarterly compliance sampling.
(8) Industrial user 90-day compliance for the new permit was received 06/14/08, however, was incomplete. The completed report with certification was received 02/11/09.

EXHIBIT XVI

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

AWTF

INDUSTRIAL WASTE PRETREATMENT PROGRAM

Enforcement Actions – 2008

Industrial User	Class	Violation	Type	City Action	I.U. Response
Hershey Creamery Company	N	Oil/Grease daily maximum discharge limit exceedance; compliance monitoring 09/30/08 and 10/01/08.	NC	Letter of violation issued ending the third quarter 2008 enforcement period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Corrected. I.U. responded within 10 days and explained that fat (oil/grease) buildup on the interior wall of the pipe between the Dissolved Air Floatation (DAF) unit and sample point may have dislodged ending in the sample and resulting in the extremely high oil/grease test results. As a plan of corrective action, contractor cleaning and vacuuming of the line between the DAF unit and sample point will be increased to quarterly in an effort to mitigate the high oil/grease results.
Harrisburg Dairies, Inc.	N	Oil/Grease daily maximum discharge limit exceedance; compliance monitoring 07/23/08.	NC	Letter of violation issued ending the fourth quarter 2008 enforcement evaluation period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Corrected I.U. responded within 3 days and indicated that a misaligned discharge pipe from the pasteurizer to the pretreatment "Equalization Tank" caused the violation. As a plan of corrective action, the discharge pipe opening was enlarged to correct the misalignment. After completing corrective action, further testing has been within the oil/grease discharge limit.
Swatara Township Landfill	N	Failure to submit a required report within 15 days following the due date.	NC	Letter of violation issued during the fourth quarter 2008 requesting the 90-day compliance report be completed by submitting the required certification statement within 30 days.	Corrected. The 90 day compliance report and accompanying certification statement was submitted on 02/11/09.

Key: C - Categorical N - Noncategorical NC - Noncompliance SNC - Significant Noncompliance

Harrisburg Dairies, Inc.	N	pH daily maximum effluent discharge limit exceedance: compliance monitoring 03/07/07.	NC	Letter of violation issued ending the first quarter 2007 enforcement evaluation period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Corrected. I.U. responded within 30 days and explained that the pH probe in the equalization tank was out of calibration. As a plan of corrective action, a weekly check of the pH probe calibration has been implemented.
Harrisburg Dairies, Inc.	N	Oil/Grease daily maximum effluent discharge limit exceedance: compliance monitoring 07/23/07.	NC	Letter of violation issued ending the third quarter 2007 enforcement evaluation period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Satisfactory response. I.U. responded within 30 days and indicated that nothing out of the ordinary happened on the day of the oil/grease exceedance. Also, due to the unusually high test result, the possibility of contamination from hitting the discharge pipe was suggested. No plan of corrective action was provided, however, it was requested that two grab samples be taken in order to confirm an unusual test result.
Harrisburg Dairies, Inc.	N	Oil/Grease daily maximum effluent discharge limit exceedance: compliance monitoring 10/30/07.	NC	Letter of violation issued ending the fourth quarter 2007 enforcement evaluation period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Pending.
Harrisburg Materials, Energy, Recycling and Recovery Facility	N	Lead and zinc daily maximum effluent discharge limit exceedance: self monitoring 03/26/07.	NC	Letter of violation issued ending the first quarter 2007 enforcement evaluation period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Corrected. I.U. Responded within 30 days and explained that the cause of the discharge violation was due to the malfunction of the sulfuric acid pumping system and pH probe used in the metal precipitation process. As a plan of corrective action, the pH probe was replaced and a temporary sulfuric acid addition pump was placed into service until the existing pumps could be serviced or replaced.

Key: C - Categorical N - Noncategorical NC - Noncompliance SNC - Significant Noncompliance

Harrisburg Materials, Energy, Recycling and Recovery Facility	N	Cadmium, lead and zinc daily maximum effluent discharge limit exceedance; self monitoring cadmium and lead on 05/15/07; compliance monitoring lead on 06/21/07 and 06/25/07.	NC	Letter of violation issued ending the second quarter 2007 enforcement evaluation period that requested an explanation of the violations and a plan of corrective action be submitted within 30 days.	Corrected. I.U. responded in 32 days and explained the cadmium and zinc exceedances were the result of excessive solids loading of the pretreatment plant. The lead exceedances were the result of intermittent operational failures of the sludge filter press diaphram pump and the need to return excess sludge holdings back into the pretreatment system. A practice that resulted in elevated lead levels. As a plan of corrective action, preliminary solids settling has been implemented in a vault adjacent to the boiler house in an effort to reduce the solids loading to the pretreatment plant and the sludge filter press diaphram pump was replaced.
Harrisburg Materials, Energy, Recycling and Recovery Facility	N	Lead daily maximum effluent discharge limit exceedance; self monitoring 12/13/07.	NC	Letter of violation issued ending the fourth quarter 2007 enforcement evaluation period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Pending.
Hershey Creamery Company	N	Oil/Grease daily maximum effluent discharge limit exceedance; compliance monitoring 08/13/07.	NC	Letter of violation issued ending the third quarter 2007 enforcement evaluation period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Corrected. I.U. responded within 30 days and explained that some liquid chocolate may have leaked down the drain on the day of the sample. As a plan of corrective action, employees have been instructed to plug the floor drains when opening the lines or tanks for cleaning and pump any spills to a drum for disposal to the spoils truck for offsite disposal.
Stroehmann Bakeries, Inc.	N	pH daily maximum effluent discharge limit exceedance; compliance monitoring 04/30/07.	NC	Letter of violation issued ending the second quarter 2007 enforcement evaluation period that requested an explanation of the violation and a plan of corrective action be submitted within 30 days.	Corrected. I.U. responded within 30 days and explained that the pH adjustment system's peristaltic pump tubing collapsed resulting in the violation. As a plan of corrective action, the collapsed acid feed tubing was replaced. Additionally, the chemical injection site was moved away from the pH probe and the pH probe was re-calibrated.

Key: C - Categorical N - Noncategorical NC - Noncompliance SNC - Significant Noncompliance

EXHIBIT XVII

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

INDUSTRIAL WASTE PRETREATMENT PROGRAM

Compliance Sampling/Inspection Schedule - 2009

Industrial User	Compliance Sampling	Facility Inspection	Self Monitoring Inspection
Ames True Temper Incorporated	February 2/August 17	March 2	July 6
Turbine Airfoil Designs, Inc.	February 23/July 20	March 16	July 6
Electronic Service & Design Corporation	February 9/July 13	April 6	July 6
Harrisburg Dairies, Inc.	March 16/September 14	April 20	August 3
HMERRF (001/002/003)	May 11/August 3	April 27	August 3
Hershey Creamery Company	March 23/September 21	May 4	August 31
New Morgan Municipal Authority	February 16/May 27 August 10/October 19	May 11	August 31
Norfolk Southern Corporation	April 6/September 28	May 25	October 5
Stroehmann Bakeries, Inc.	May 18/October 19	June 1	October 5
Swatara Township	March 9/October 26	June 8	October 5

Scheduled monitoring and inspection visitation will be through the week of the date above.

EXHIBIT XVIII

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

INDUSTRIAL WASTE PRETREATMENT PROGRAM

Annual Newspaper Publication

of

2008 Significant Noncompliance Violators

(No Significant Noncompliance Violations occurred in 2008)

EXHIBIT XIX

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

INDUSTRIAL WASTE PRETREATMENT PROGRAM

Influent Metals Concentration, mg/l - 2008

Date	As	Cd	Cr	Cu	CN	Pb	Hg	Ni	Zn
02/14/2008	<0.005	<0.001	<0.002	0.029	<0.005	0.004	<0.0005	<0.01	0.160
05/07/2008	<0.005	0.002	0.005	0.114	<0.005	0.020	<0.0005	<0.01	0.410
07/16/2008	<0.005	<0.001	<0.002	0.070	<0.005	0.006	<0.0005	<0.01	0.270
12/09/2008	<0.005	<0.001	<0.003	0.037	<0.005	0.004	<0.0002	<0.01	0.220
AVERAGE	**<0.005**	**0.001**	**0.003**	**0.063**	**<0.005**	**0.009**	**<0.0005**	**<0.01**	**0.265**

Effluent Metals Concentration, mg/l - 2008

Date	As	Cd	Cr	Cu	CN	Pb	Hg	Ni	Zn
02/14/2008	<0.005	<0.001	<0.002	<0.005	<0.005	<0.003	<0.0005	<0.01	0.050
05/07/2008	<0.005	<0.001	<0.002	0.005	<0.005	0.007	<0.0005	<0.01	0.060
07/16/2008	<0.005	<0.001	<0.002	<0.005	<0.005	<0.003	<0.0005	<0.01	0.030
12/09/2008	<0.005	<0.001	<0.003	<0.005	<0.005	<0.003	<0.0002	<0.01	0.040
AVERAGE	**<0.005**	**<0.001**	**<0.003**	**0.005**	**<0.005**	**0.004**	**<0.0005**	**<0.01**	**0.045**

Biosolids Metals Concentration, mg/kg - 2008

Date	As	Cd	Cr	Cu	CN	Pb	Hg	Ni	Zn
02/13/2008	<18	6.4	44.4	653	3.20	98	1.63	24	2600
04/17/2008	<15	5.0	39.9	577	2.11	117	0.97	23	2120
06/11/2008	<16	5.2	38.8	598	<1.40	96	1.60	23	2240
07/16/2008	<17	3.7	42.3	610	<1.42	94	1.36	22	2240
10/01/2008	<14	4.8		689		94	<0.85	26	2510
12/08/2008	<14	4.9	28.0	444	1.20	66	0.84	18	1810
AVERAGE	**<18**	**5.0**	**38.7**	**595**	**1.87**	**94**	**1.21**	**23**	**2253**

EXHIBIT XX

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Contract Waste Hauling Program 2007 - 2008

	Process		Septic		Total	
Month	Gallons	Revenue	Gallons	Revenue	Gallons	Revenue
January	1,246,750	$34,272.10	0	$0.00	1,246,750	$34,272.10
February	657,400	$23,878.40	16,500	$594.00	673,900	$24,472.40
March	738,950	$34,871.10	54,000	$1,944.00	792,950	$36,815.10
April	1,337,600	$39,240.00	69,500	$2,502.00	1,407,100	$41,742.00
May	1,511,700	$44,535.60	80,000	$2,880.00	1,591,700	$47,415.60
June	1,167,000	$29,887.20	65,000	$2,340.00	1,232,000	$32,227.20
July	860,400	$42,556.20	90,000	$3,240.00	950,400	$45,796.20
August	1,100,400	$61,152.60	65,000	$2,340.00	1,165,400	$65,492.60
September	2,338,250	$97,901.55	19,500	$702.00	2,357,750	$98,603.55
October	813,600	$38,577.60	105,000	$3,780.00	918,600	$42,357.60
November	863,600	$23,562.00	114,000	$4,104.00	977,600	$27,660.00
December	610,300	$20,077.20	61,000	$2,196.00	671,300	$22,273.20
Total - 2007	13,245,950	$490,511.55	739,500	$26,622.00	13,985,450	$519,127.55
Monthly Average - 2007	1,103,829	$40,875.96	61,625	$2,218.50	1,165,454	$43,260.63
January	828,100	$41,695.20	58,500	$2,106.00	886,600	$43,801.20
February	980,400	$50,447.40	15,000	$540.00	995,400	$50,987.40
March	1,313,700	$53,424.00	40,000	$1,440.00	1,353,700	$54,864.00
April	1,063,150	$47,563.05	30,000	$1,080.00	1,093,150	$48,643.05
May	520,050	$25,407.45	49,000	$1,764.00	569,050	$27,171.45
June	1,007,700	$59,459.40	95,000	$3,420.00	1,102,700	$62,879.40
July	1,571,900	$77,455.80	75,000	$2,700.00	1,646,900	$80,155.80
August	1,150,100	$61,143.60	95,000	$3,420.00	1,245,100	$63,563.60
September	1,233,760	$37,432.20	90,000	$3,240.00	1,323,760	$40,672.20
October	1,816,150	$81,759.60	67,000	$3,240.00	1,883,150	$84,999.60
November	922,100	$26,638.80	40,000	$1,440.00	962,100	$28,078.80
December	1,345,000	$51,596.40	38,900	$1,400.40	1,383,900	$52,996.80
Total - 2008	13,752,110	$614,022.90	693,400	$25,790.40	14,445,510	$638,813.30
Monthly Average - 2008	1,146,009	$51,168.58	57,783	$2,149.20	1,203,793	$53,234.44

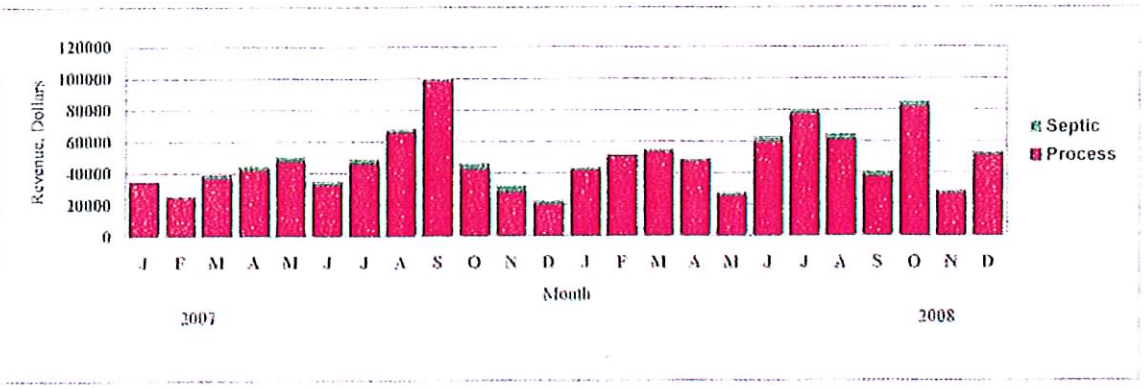


EXHIBIT XXI

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

AWTF

Contract Waste Hauler Contributions - 2008

Contract Waste Hauler	January	February	March	April	May	June	July	August	September	October	November	December	Total Gallons
Bloomfield Borough WWTP	18,000	24,000	24,000	24,000	18,000	18,000	24,000	24,000	18,000	12,000	6,000	0	210,000
Boro. of Carroll Valley	20,000	20,000	40,000	25,000	25,000	15,000	15,000	20,000	10,000	25,000	30,000	25,000	270,000
Borough of Highspire	0	0	0	0	0	0	99,000	99,000	0	0	0	0	198,000
Boro. of Lemoyne WWTP	28,800	0	0	0	0	0	0	0	0	0	0	0	28,800
Boro. of New Cumberland	132,000	114,000	114,000	138,000	108,000	96,000	90,000	78,000	78,000	108,000	96,000	162,000	1,314,000
Clarks Ferry All Amer. TS	2,300	2,300	4,600	2,300	2,300	4,600	2,300	2,300	4,600	4,600	2,000	4,000	38,200
Conewago Twp. Sewer Authority	0	36,000	30,000	0	12,000	54,000	6,000	0	0	12,000	0	54,000	204,000
Creekview Sewage Plant	8,800	6,600	6,600	2,200	0	0	0	0	4,400	0	0	4,400	33,000
Dauphin Borough	0	0	0	0	24,000	18,000	0	0	0	0	0	0	42,000
Defense Distribution Depot Susq. PA	0	0	0	0	0	0	0	0	24,000	0	0	18,000	42,000
Elizabethville Area Authority	54,000	60,000	18,000	48,000	108,000	0	12,000	6,000	0	24,000	0	48,000	378,000
Energex American, Inc.	0	0	0	0	0	71,500	117,000	0	32,500	136,500	32,500	78,000	468,000
Fairfield Municipal Authority	15,000	15,000	0	35,000	0	30,000	20,000	15,000	10,000	15,000	20,000	20,000	195,000
Halifax Municipal Authority	12,000	0	0	0	18,000	0	0	0	12,000	0	18,000	0	60,000
Liverpool Municipal Authority	9,200	27,600	13,800	13,800	13,800	6,900	13,800	6,900	9,200	13,800	16,300	6,300	151,400
Lower Allen Twp. Authority	288,000	384,000	360,000	336,000	144,000	522,000	594,000	498,000	120,000	630,000	24,000	210,000	4,110,000
Loysville Village Muni. Authority	0	0	0	6,200	0	0	0	0	0	0	0	0	6,200
Millerstown Sewer Plant	29,900	9,200	4,600	4,600	11,500	32,200	138,000	18,400	4,600	9,200	8,600	16,000	286,800
Morton Buildings, Inc.	0	4,000	0	0	0	0	4,000	0	0	0	0	2,500	10,500
Natural Soil Products	102,000	174,000	606,000	342,000	6,000	0	0	192,000	702,000	606,000	468,000	408,000	3,606,000
Newberry Twp. Muni. Authority	0	0	0	14,850	14,850	0	59,400	79,200	29,700	24,750	0	0	222,750
Newville Water & Sewer Auth.	34,800	35,000	34,800	0	0	0	0	0	0	0	0	36,000	140,600
Oak Tree Environmental Services	0	0	0	0	0	0	0	0	0	0	0	3,900	3,900
Paradise Mobile Home Park	9,200	9,200	13,800	9,200	4,600	6,900	6,900	9,200	6,900	9,200	8,600	6,300	100,000
Regency Woods North	18,600	7,500	17,500	10,000	10,000	13,600	15,000	16,100	15,800	16,100	11,100	12,500	163,800
Shealer's Septic Service	45,500	15,000	40,000	30,000	49,000	95,000	75,000	95,000	90,000	67,000	40,000	35,000	676,500
South Middleton Twp. Muni. Auth.	0	0	0	0	0	54,000	316,500	60,000	132,000	144,000	168,000	234,000	1,108,500
Twin Boroughs Sani. Authority	58,500	52,000	26,000	52,000	0	65,000	39,000	26,000	26,000	26,000	13,000	0	383,500
Total Gallons	886,600	995,400	1,353,700	1,093,150	569,050	1,102,700	1,646,900	1,245,100	1,329,700	1,883,150	962,100	1,383,900	14,451,450

EXHIBIT XXII

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Cogeneration Electrical Production: 2007 - 2008

Period	Percent Run Time	Daily Avg Kilowatt	Kilowatt Hours Produced	Revenue Collected
Dec 29th - Jan 29th, 2007	16	1,516	47,000	$2,820.00
Jan 29th - Feb 28th, 2007	42	4,043	113,200	$6,792.00
Feb 28th - Mar 29th, 2007	21	2,025	62,760	$3,766.00
Mar 29th - Apr 29th, 2007	41	3,966	119,000	$7,140.00
Apr 29th - May 30th, 2007	79	7,588	235,240	$14,114.40
May 30th - Jun 27th, 2007	56	5,413	162,400	$9,744.00
Jun 27th - Jul 27th, 2007	50	4,826	149,600	$8,976.00
Jul 27th - Aug 27th, 2007	57	5,515	170,960	$10,257.60
Aug 27th - Sep 27th, 2007	54	5,191	155,720	$9,343.20
Sep 27th - Oct 27th, 2007	46	4,372	135,520	$8,131.20
Oct 27th - Nov 29th, 2007	45	4,285	128,560	$7,713.60
Nov 29th - Dec 29th, 2007	47	4,467	138,480	$8,308.80
Total - 2007	554	53,207	1,618,440	$97,106.80
Monthly Average - 2007	46	4,434	134,870	$8,092.23
Dec 29th - Jan 29th, 2008	57	5,435	168,480	$10,108.80
Jan 29th - Feb 28th, 2008	51	4,908	142,320	$8,539.20
Feb 28th - Mar 29th, 2008	18	1,748	54,200	$3,252.00
Mar 29th - Apr 29th, 2008	71	6,803	204,800	$12,288.00
Apr 29th - May 30th, 2008	57	5,458	169,200	$10,152.00
May 30th - Jun 27th, 2008	69	6,577	197,320	$11,839.20
Jun 27th - Jul 27th, 2008	75	7,170	222,280	$13,336.80
Jul 27th - Aug 27th, 2008	92	8,831	273,760	$16,425.60
Aug 27th - Sep 27th, 2008	89	8,563	256,880	$15,412.80
Sep 27th - Oct 27th, 2008	84	8,067	250,080	$15,004.80
Oct 27th - Nov 29th, 2008	80	7,699	230,960	$13,857.60
Nov 29th - Dec 29th, 2008	75	7,159	221,920	$13,315.20
Total - 2008	818	78,418	2,392,200	$143,532.00
Monthly Average - 2008	68	6,535	199,350	$11,961.00

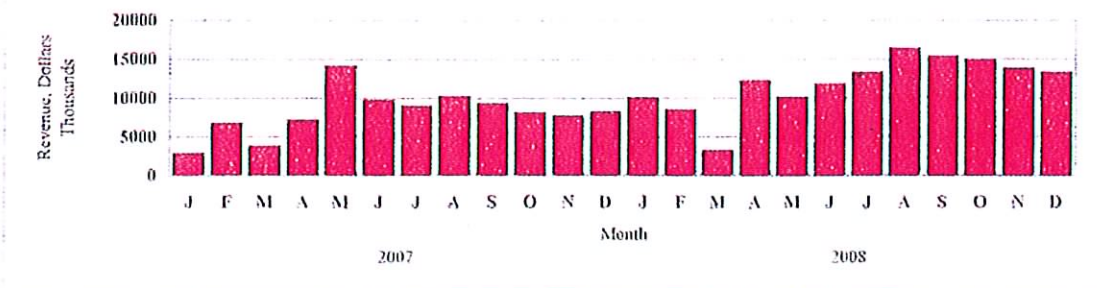


EXHIBIT XXIII

CITY OF HARRISBURG
ADVANCED WASTEWATER TREATMENT FACILITY

Personnel Directory – 2008

Management Staff

Name	Position	Employment Date
Deily, Michael A.	Superintendent	01/20/87
Fenstermacher, C. Richard	Maintenance Supervisor	02/20/73
Rosentel, Jess E.	Shift Supervisor	11/29/04
Schaffer, Randy L.	Pretreatment Coordinator	03/06/89
Williams, John F.	Director of Admin./Maint.	11/20/70

Bargaining Unit Employees

Name	Position	Employment Date
Akra, Daniel	Field Maintenance Worker I	12/12/88
Anderson, Alfred J.	Laborer II	03/16/92
Bowers, Rodney G.	Master Electrician	12/10/79
Brightbill, Barry L.	Operator IV	07/28/86
Crosson, Richard A.	Operator II	02/16/88
Egenrieder, Edward C.	Laboratory Technician II	06/17/91
Foley, James M.	Operator IV	02/17/81
Fox, Michael W.	Field Maint. Worker I	1/6/1997
Freysinger, Kenneth L.	Field Maint. Specialist II	07/01/85
Green, Isaac E.	Operator II	08/12/02
Grove, Ronald A.	Operator I	07/15/91
Hoke, Raymond E.	Operator IV	02/09/81
Hurst, Kevin E.	Operator IV	10/15/91
Jenkins, Kim J.	Field Maint. Specialist II	09/08/87
Jordan, David R.	Laborer III	07/27/92
Kelly, Leonard R.	Operator IV	01/25/72
Kolakowski, David J.	Operator IV	08/12/83
Lenker, Richard E.	Maint. Worker IV	04/29/74
Martin, Kevin E.	Operator I	10/15/91
McArthur, Carrie L.	Admin. Asst.	06/25/05
McPherson, Alan C.	Field Maint. Worker II	12/16/85
Mountain, Brian L.	Operator IV	07/13/81
Ritter, Randy F.	Maint. Worker IV	08/27/79
Scheib, Deborah A.	Laboratory Technician IV	05/21/79
Shipper, James I.	Maint. Worker IV	04/02/79
Snyder, Charles S.	Operator IV	09/28/92
Stein, Mitchell G.	Field Maint. Specialist II	04/04/88
Wahosky, Jeffrey S.	Operator III	05/02/92
Werner John L.	Maint. Worker IV	07/05/74
Wilfong, Mark N.	Operator IV	12/15/80
Zeigler, James L.	Maint. Worker IV	04/30/79

EXHIBIT XXIV

CITY OF HARRISBURG
ADVANCED WATEWATER TREATMENT FACILITY

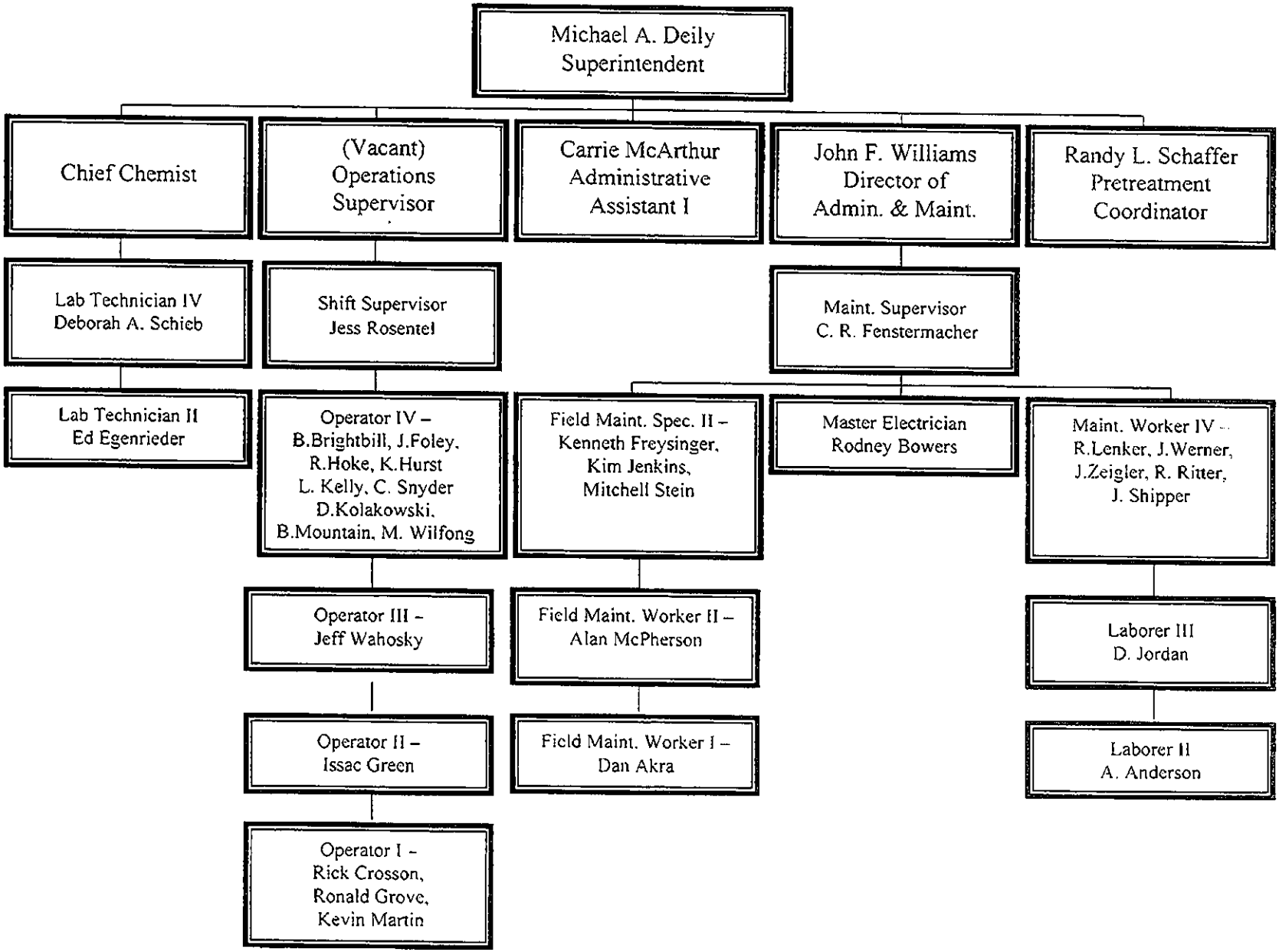


Figure 1

Influent Metals Concentration

Yearly Averages: 2004 - 2008

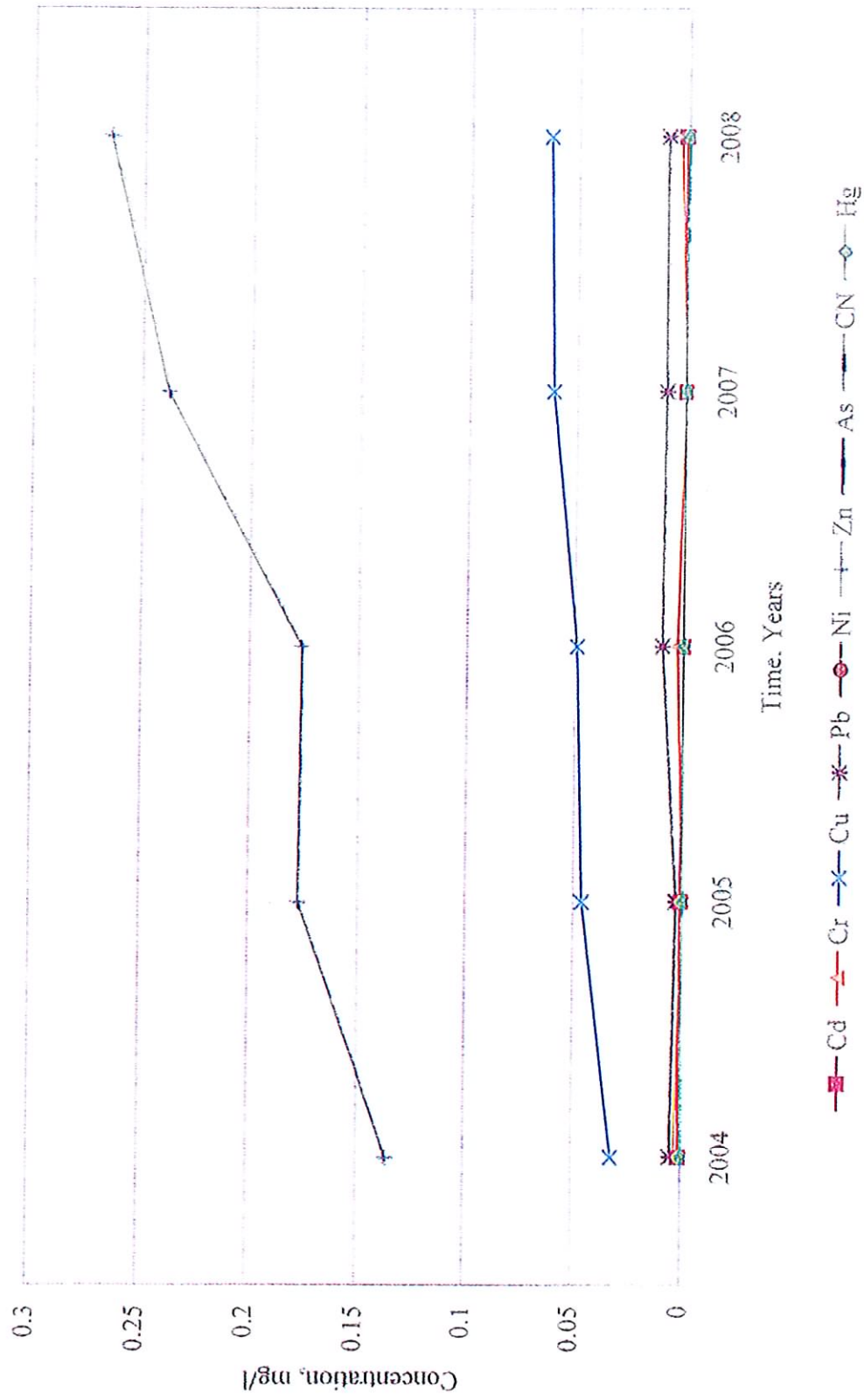


Figure II

Effluent Metals Concentration

Yearly Averages: 2004 - 2008

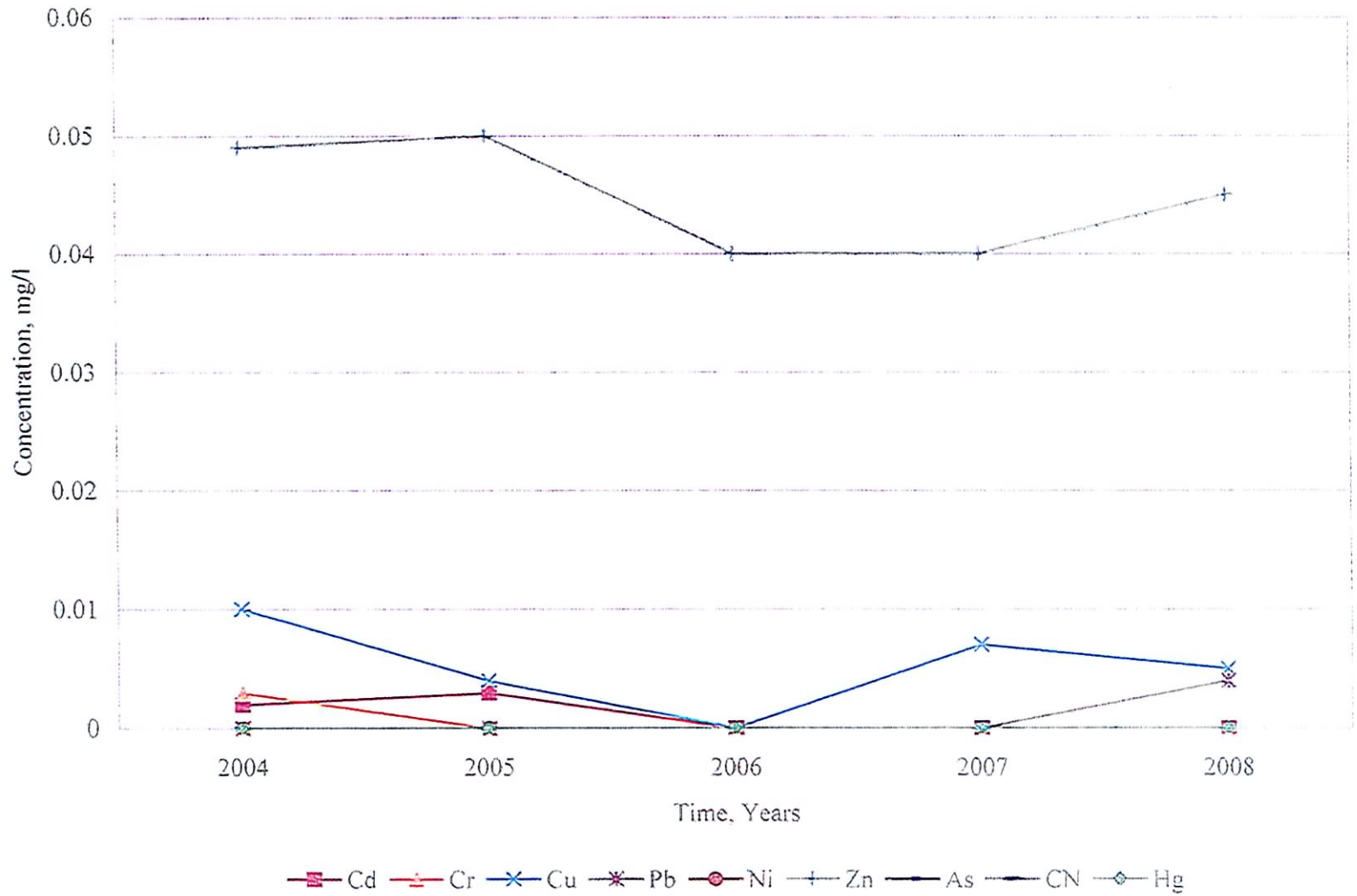
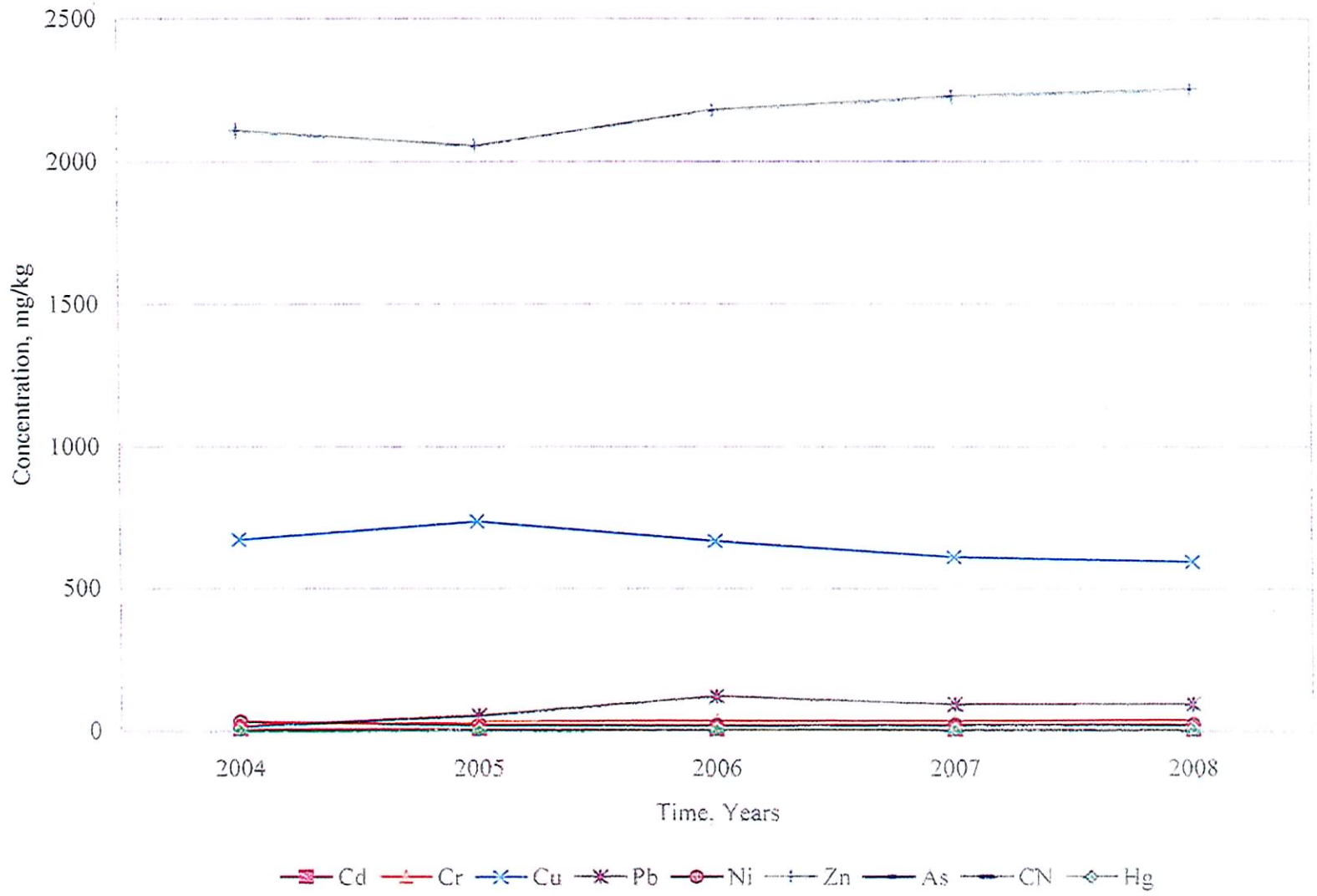


Figure III

Biosolids Metals Concentration

Yearly Averages: 2004 - 2008



BUREAU OF WATER

CHAD BINGAMAN - DIRECTOR

GENERAL

The purpose of this report is to furnish an overview of the operation and maintenance of the Harrisburg Water System during calendar year 2008. The function of this system is to provide, on demand, sufficient potable water to a service area, which includes the City of Harrisburg, portions of the Borough of Penbrook, Susquehanna, Swatara and Lower Paxton Townships.

During calendar year 2008, the water system provided daily service that met or exceeded the requirements of the Federal Safe Drinking Water Act to approximately 20,980 service accounts or an estimated population of 66,000.

HISTORY AND DEVELOPMENT

The origin of the present water-works dates back to 1839, when the Commonwealth granted Harrisburg the authority to take water from the Susquehanna River for supplying its 20,000 residents. By 1843, the original water house was completed along the river near Front and State Streets. A reservoir in the vicinity of Sixth and North Streets was utilized, and a pipeline distribution system gradually developed in the central part of the town. Direct pumping was used for many years thereafter, without the use of filtering methods or chemical controls.

In 1860, Harrisburg was incorporated as a Third Class City, and rapid expansion into the Hill and Uptown districts required larger facilities. An open reservoir was completed in 1873, in Reservoir Park, which provided a gravity fed system by utilizing the high elevation of the park. The original Pump Station was built in 1874 at Front and North Streets for the purpose of mechanically pumping water into the new reservoir. By 1903, the Pumping Station had to be re-equipped with new steam boilers, engines, and pumps, capable of meeting the demands of more than 50,000 residents. A Filtration Plant was constructed on Hargest Island, now known as City Island, and placed into operation in 1905, which provided a filtering system with chemical treatment before the water was pumped into the reservoir.

In 1924, a number of improvements were completed for the extension and enlargement of the water system at a cost of $1,600,000. The capacity of the Filter Plant was increased to twice its original size; two turbine pumping units and boiler equipment were installed at the Pump Station; a new 36" force main was laid along North Street from the Pumping Station to Sixth Street and continued to Fifteenth and State Streets; a new 28,000,000 gallon capacity reservoir, completely covered with reinforced concrete, earth, and grass, was constructed in Reservoir Park. This third and largest reservoir was required to supply areas expanding into more distant and higher elevated sections in the Hill district of the City.

In 1936, Harrisburg survived one of the most devastating floods in its history. The Susquehanna River reached more than 32 feet, inundated City Island, and the southern section of

the City. The entire water system was out of service for a week and emergency measures were required to supply the residents with limited water brought in by tank trucks.

Shortly thereafter, the development of a new mountain supply in Rush Township along Clark Creek, about 20 miles northeast of the City, was undertaken by City Council, with the vital assistance of federal and state governments. The William T. DeHart Dam was completed on July 1, 1940 and impounded water flowing from Clark Creek and 23 smaller tributaries, producing a body of water with a capacity of 5,260,000,000 gallons that extended four and a half miles upstream of the dam. The reservoir collected water from a 21.62 square mile drainage area consisting of mostly forestland between the ridges of Peter's and Stony Mountains. Raw-treated mountain water was first delivered to the City during the latter part of the same year. This enormous undertaking was one of the largest and most successful projects during this era of the City's water system. The cost was more than four million dollars, but not only gave the City's residents a natural supply of fresh water, but also prevented any possible ravage to the system from floods.

Until 1948, it was advisable to augment the mountain supply with river water through the old system because the Clark Valley supply was not entirely of proper quality. On January 23, 1948, the old system was discontinued entirely; the Pump Station and Filter Plant were placed on a standby basis, but were maintained operable in the event of emergency.

In 1954 an additional 4 feet was added to the DeHart spillway wall increasing its storage capacity to six billion gallons. The DeHart Reservoir currently has an overflow elevation of 644 feet and an approximate dependable yield of 10.5 million gallons per day.

From 1948, the City Island Filtration Plant functioned as a reserve source of water for the City. The facility suffered considerable damage during the flood of 1972, and all filtration operations ceased. It stood vacant until 1987, when for safety reasons it was razed.

During 1987 and 1988, a hypalon lining was installed covering the 20 million gallon finished water reservoir.

In 1990 the sale and transfer of ownership of the water system to The Harrisburg Authority with the City remaining as the managing agent took place. Ground breaking for the Dr. Robert E. Young Water Services Center and River Front Pump Station took place in October of that same year. These projects were completed on July 19, 1994 when the Dr. Robert E. Young Water Services Center was placed in operation. This undertaking was the largest and most successful project of this modern era of the water system. At a cost of more than twenty million dollars it provides the consumers a state-of-the-art water treatment facility and a back-up water source in the Susquehanna River in case of severe drought or other emergencies.

The DeHart Reservoir's Control Building provides flow metering and the capability of adding chlorine, soda ash, and potassium permanganate as required to the raw water prior to its conveyance by gravity through a 42-inch diameter transmission main to the Dr. Robert E. Young Water Services Center in Susquehanna Township.

The Susquehanna River is the water system's secondary water supply. The system's river intake consists of a screened intake structure and a 36-inch diameter pipe. Raw water flows by

gravity through the river intake structure to the Susquehanna River Pump Station's intake well where it is then pumped, using three 400 HP vertical turbine pumps rated at 7,000-GPM each, to the Dr. Robert E. Young Water Services Center. The capability exists to add potassium permanganate to the raw water prior to treatment, if required.

The transmission system includes 20 miles of 42-inch diameter steel-reinforced concrete pipe, which conveys water by gravity from the DeHart Reservoir in Clark Valley to the City of Harrisburg. The 42-inch diameter transmission main reduces to a 24-inch diameter pre-stressed concrete cylinder pipe at Division and 7th Streets before it reaches the influent of the Dr. Robert E. Young Water Services Center.

The Dr. Robert E. Young Water Services Center has two parallel treatment process trains with a design capacity of 20 million gallons per day (MGD). The process trains include two raw water flow meters, four three-stage paddle wheel flocculators, four rectangular clarifiers, eight multimedia gravity filters with an air scour backwash system, two 9,400 GPM backwash pumps, and two finished water flow meters. The Dr. Robert E. Young Water Services Center's treatment capabilities include the chemical addition of carbon, alum, soda ash, phosphate, hydrated lime, caustic soda, ammonia, zinc orthophosphate, and sodium silicofluoride. Disinfection is achieved with chlorine and sodium chlorite addition. Four finished water pumps at the Dr. Robert E. Young Water Services Center are used to transfer finished water to the Upper and Lower Reservoirs located at Reservoir Park for eventual distribution throughout the water system.

The water system uses two reservoirs to store finished water for distribution throughout its service area. The reservoirs are located at Reservoir Park and serve two different pressure zones. In 2000 the Lower Reservoir was taken out-of-service due to structural failure on the west wall. A project commenced in 2001 to replace the old reservoir with two 6,000,000-gallon tanks. The new Lower Reservoir tanks were placed in service on April 1st of 2002 and serve consumers who are located west of the vicinity of 18th Street within the City of Harrisburg.

The Upper Reservoir serves the water system's high-pressure zone and is a reinforced concrete underground reservoir. The basin has a storage capacity of 28 million-gallons. The Upper Reservoir supplies water to consumers located east of the vicinity of 18th Street within the City of Harrisburg and in portions of the Borough of Penbrook, Susquehanna, Swatara, and Lower Paxton Townships.

In June of 2002, an energy conservation project was completed with the installation of an in-line hydro-turbine generator. The generator produces electricity utilizing the water flow from the DeHart reservoir, allowing for a reduction in the Dr. Robert E. Young Water Services Center electrical dependency. (Refer to Exhibit G for additional details)

The water system's distribution network includes more than 250 miles of cast-iron, ductile iron, and prestressed concrete cylinder pipe in various sizes from 4 to 42 inches in diameter. There are approximately 1,690 fire hydrants and 3,540 valves in operation within the system.

There are a total of five (5) interconnects between the Harrisburg Water System and the water distribution system owned by United Water Inc. which are used as emergency sources of water. One exists at the intersection of Hoffman and Vaughn Streets in the City of Harrisburg and consists of an eight-inch diameter pipe connection. The second is located at the intersection of

Derry and 29th Streets in the City of Harrisburg and consists of a ten-inch diameter pipe connection. The third is located in the Edgemont area of Susquehanna Township along Edgemont Road that consists of a ten-inch diameter pipe connection. The Fourth is located at 28th Street and Locust Lane in Susquehanna Township that consists of an eight-inch diameter pipe connection. All four of these finished water interconnects have a water meter and check valve and are located in an underground vault. Finally a raw water interconnect located off the 42" main line, near the Rockville Bridge supplies untreated water to United's Water Filtration Plant on an emergency basis.

Our system utilizes two pumping stations to convey water and maintain adequate distribution system pressure. The Gatehouse Pump Station located at Reservoir Park, utilizes two 400 HP horizontal split case centrifugal pumps, each rated for 8,700-GPM, to transfer finished water from the Lower Reservoir to the Upper Reservoir. A booster station, located in Susquehanna Township serves the Union Square Industrial Park. It includes a dual parallel pumping system, which consists of a 750-GPM triplex constant pressure booster pumping system and a 1,000-GPM-fire pump.

BUREAU OF WATER

2008

ACCOMPLISHMENT REPORT

DEHART RESERVOIR AND WATERSHED

Essential functions are to manage the DeHart Dam facilities and watershed operations. The division consists of a Maintenance/DeHart Superintendent, Operations Superintendent/Watershed Manager and a Maintenance Specialist.

In 2008, potassium permanganate was not required for the control of taste and odor associated with algae and organic matter in the Reservoir.

A bypass from the reservoir is mandated by the State Water Allocations Permit to provide a minimum daily conservation release of 6.5 MGD for the purpose of preserving the natural flow of Clarks Creek. The rate of this flow is monitored at the Carsonville Weir; located downstream of the spillway. Throughout 2008, the required minimum daily conservation release was maintained or exceeded (See Exhibit E).

The development of the Watershed Management Plan continued with the enhancement of the Water Quality Monitoring Program. Monitoring provides information on the depth from which to draw off water of optimal quality. Applications of copper sulfate were avoided during 2008, which saved the City money in terms of the treatment cost for algae control.

The Secchi Disc Depth is a measure of transparency of the water that assists the watershed manager in determining the amount of algae growth present. The transparency of the water in DeHart Reservoir stayed above the level proven to show eutrophic conditions (i.e., excessive algae growth) throughout 2008.

Other Accomplishments in 2008:

- Completed and passed the Annual PA Department of Environmental Protection Dam Inspection with comments.
- Utilized the DeHart database and Water Quality Monitoring Program to select appropriate depth for the raw water intake.
- Coordinated pulpwood harvest #4, #5, and #6 on 637.8 acres of watershed property.
- Installed intercom system and security gate release in Residence 1 and 2.
- Replaced broken 6" terra cotta drain pipe with new schedule 80 pipe.
- Repaired weir level transmitter.
- Replaced the DeHart Dam toe drain weir.

OPERATIONS/MAINTENANCE DIVISION

Essential functions are to operate and maintain all buildings and equipment at the Dr. Robert E. Young Water Services Center, DeHart Dam, Front Street River Intake and Pump Station, Gatehouse, Lower Reservoir, Upper Reservoir, and the Union Square Booster Station. The division consists of a DeHart/Maintenance Superintendent, Operations Superintendent/Watershed Manager, (9) Water Plant Operators, (4) Maintenance Specialists, and (1) Electrician.

Through 2008, a total of 3063.10 million gallons (MG) of water were withdrawn from the combined sources: 3063.10 MG from the DeHart Reservoir, 0 MG from the Susquehanna River, and 0 MG was supplied to United Water Pennsylvania via the Emergency Raw Water Interconnect (refer to Exhibit B for additional details). This combined total represents an average daily withdrawal of 8.37 MG, which was in compliance with the State Water Allocation Permit.

Water treatment includes the addition of lime and alum (aluminum sulfate) at the head of the plant for coagulation, chlorine prior to filtration for disinfection, fluoride to prevent dental caries, soda ash and caustic soda for pH/alkalinity adjustment, and finally, zinc orthophosphate for corrosion control of the distribution system.

Other Accomplishments in 2008:

- Conducted numerous tours of the Bureau Facilities for schools and other civic groups throughout the year.
- Continued utilizing the computerized Maintenance Program to schedule preventive maintenance and equipment repairs at all Bureau Facilities.
- Reinstalled repaired SEW Eurodrive motor on floc basins 301-302C
- Re-plumbed zinc orthophosphate system and installed .5 to 12 gpm flow meter.
- Installed steel I-beams for the VFD cabinets and transformers.
- Removed all the old chlorine room piping, and chlorine equipment.
- Continued utilizing zinc orthophosphate for corrosion control within the distribution system.
- Conducted several Water Treatment workshops in conjunction with the Pa-AWWA.
- Received the Partnership for Safe Water, Director's Award for the seventh consecutive year.
- Worked with PaWARN in participating in a PEMA state-wide exercise in October.
- Passed a DEP inspection in July.
- The High Service Reservoir was inspected.

WATER QUALITY DIVISION

The Colilert method was utilized during 2008 to test for total coliform and Escherichia coli; there were no positive water samples in the distribution system during the yearly monitoring period. The Bureau of Water is required by Pennsylvania Department of Environmental Protection (PA DEP) to test throughout the year for certain parameters, including trihalomethanes (TTHM's), haloacetic acids (HAA's), total organic carbon (TOC's), volatile organic compounds (VOC's), synthetic organic compounds (SOC's), nitrates, radiologicals and zinc (Refer to Exhibit A).

A change in the corrosion control treatment process in 1999 required the City of Harrisburg to conduct extensive lead and copper monitoring within the distribution system in June and October of 2000. The results of that monitoring were well below State and Federal, lead and copper regulations. Extensive testing continued in 2001 throughout the distribution system, on the basis of those results, the Bureau was granted reduced monitoring status, to a tri-annual schedule for copper and lead analyses. The Copper and Lead Survey analyses in 2007 were below the MCL of <0.015mg/l for lead and < 1.3mg/lfor copper. This Survey again verified the success of our Corrosion Control Program. As a result of our successful program, we were again awarded a triennial testing schedule.

Our Water Quality Monitoring Program continued to ensure production of high quality water. In addition to onsite monitoring at the Water Treatment Facility, weekly distribution samples were collected and analyzed for free and total chlorine, temperature, pH, iron, total dissolved solids, total hardness, alkalinity and phosphate. This data allows us to monitor the water quality throughout the distribution system.

The Water Quality Lab handles customer complaints ranging from discolored water to odor. All complaints are logged and investigated to determine and eliminate the cause, to the consumer's satisfaction. All 17 water complaints during 2008 were determined to be the result of lack of maintenance of the consumers' hot water heater; water main or service line breaks or flow disruption from fire hydrants or fire line usage.

Other Accomplishments in 2008:

- The 2007 Consumer Confidence Report was transmitted to all consumers before June 1, 2008 as required by the Federal Safe Drinking Water Act.
- The WQA successfully completed the annual Bacteriological Performance Evaluation as required by the Microbiological Laboratory's Certification to perform testing for the presence of Coliform and E. Coli bacteria.
- Continued sampling for LT2 Cryptosporidium and Disinfection Byproducts.
- Completed Stage 2 D/DBP Rule Testing.
- Received approved onsite evaluation for Laboratory Accreditation from the DEP.

DISTRIBUTION DIVISION

The Distribution Division is assigned responsibility for operations, maintenance and repair of over 250 miles of distribution system piping and appurtenances including approximately 1,690 fire hydrants and 3,540 valves. This Division is directly responsible for the installation of water meters, meter readings and maintenance of associated records for approximately 18,000 domestic services, 2,450 commercial services, and 435 institutional services and connections. They provide all service taps, hydrant flow tests, service application review and approval in accordance with the City Codified Ordinances and the Rules and Regulations of The Harrisburg Authority, and maintain records as required. They perform all Pennsylvania One-Call System utility locations for water and sewer mains. The Division consists of a Distribution Superintendent, (7) Service Persons, (2) Water Meter Readers, (2) Laborers, and (1) Secretary.

Other Accomplishments in 2008:

- Completed the annual employee Right-to-Know training.
- Attended the PA One-Call System Exposition.
- Repaired 25 main breaks.
- Completed 10 final street restorations.
- Excavated 90 curb boxes for delinquent termination.
- Completed 9108 water and sewer locates for the PA One-Call System.
- Assisted other City Bureau's and Department's as requested.
- Repaired or Replaced 77 Fire Hydrants.

BUREAU OF WATER

2009

GOALS AND OBJECTIVES

DEHART DAM

- Address comments in the PA Department of Environmental Protection's Annual Dam Inspection Report.
- With the approval of The Harrisburg Authority, plan a timber harvest and a pulpwood harvest sale in the areas indicated in the Forest Stewardship Plan.
- Continue to monitor Clark Creek and the watershed to determine sources of nutrient and bacterial input.
- Hire an independent laboratory to analyze algae samples of DeHart Reservoir on a quarterly basis.
- Remove dead trees from the shoreline of the reservoir.
- Continue to clean vegetation from the mountain line access road.
- Finish the backfilling around the toe drain and reseed the area.
- Remove all small trees and brush on the north side of the spillway.
- Finish chipping all cut sumac trees along the toe of the dam.
- Have access roads throughout the facility repaved.
- Re-post the entire reservoir area with new signs.
- Replace access road cables with new gates.
- Continue to implement chlorophyll A sampling on the reservoir.
- Continue to assist other departments and divisions as required.
- Get final approval for the updated (EAP) emergency action plan for the DeHart Dam.

OPERATIONS/MAINTENANCE DIVISION

- Continue to process data collection and reporting with the use of a computer database to ensure that all Federal, State and Local water quality standards are met.
- Continue to monitor utility and chemical expenses in order to reduce the operational costs associated with all Bureau facilities.
- Continue the preventive maintenance program.
- Continue to provide the necessary submittals to continue to receive the Partnership For Safe Water' Directors Award.
- Continue to work in conjunction with the Pa-AWWA in conducting/facilitating various training workshops and seminars throughout the year.
- Add (VFD's) variable frequency drives to the finished water pumps.
- Re-pipe the entire chlorine room, and add direct tank mounted vacuum regulators to improve safety.

WATER QUALITY DIVISION

- The Microbiological Laboratory will continue to be operated and maintained in accordance with the standards necessary to perform quality bacteriological testing and to maintain certification.
- Continue the in-house program of analyzing chemical parameter unknowns by operations staff to assure precision and accuracy of equipment, methods, and operator's technique.
- Evaluate methodology and equipment of chemical testing procedures to ensure accurate results.
- Implement and expand the QA/QC protocols within the operations lab and in the field during sampling.
- The WQA will continue responding to consumer complaints in an effort to promote confidence in our drinking water.
- The WQA will update the SOP's for all parameters analyzed in the Microbiological and Operations laboratories.

DISTRIBUTION DIVISION

- Attend monthly Bureau Safety Committee and Staff meetings.
- Continue water sales to bulk water haulers.
- Continue system-wide leak detection.
- Continue to work on meter report forms.
- Continue the delinquent shut-off program in conjunction with the Bureau of Operations & Revenue.
- Continue to repair or replace fire hydrants as required.
- Continue to assist other departments and divisions as required.
- Continue to work on street cut restorations.

EXHIBIT A

Process Control/Water Quality Analysis - 2008

PARAMETERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Average	MCL Limits
Total Coliform; Presence/Absence														
DeHart Influent	P	P	P	P	P	P	P	P	P	P	P	P	P	
Susquehanna Influent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Distribution System	A	A	A	A	A	A	A	A	A	A	A	A	<1	< 5% Positive
Chlorine Residual, mg/l Free														
Filter Plant Effluent	1.70	1.61	1.60	1.57	1.66	1.71	1.70	1.71	1.70	1.71	1.69	1.70	1.67	
Distribution System	0.97	0.92	0.90	0.83	0.78	0.89	0.77	0.81	0.78	0.83	0.84	0.95	0.86	> 0.02
Turbidity, NTU														
Influent from DeHart	0.77	0.83	0.79	0.65	0.68	0.86	0.63	0.58	0.75	0.71	0.69	0.57	0.71	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Filter Plant Effluent	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.05	<0.30
pH, Std Units														
Influent from DeHart	6.43	6.33	6.22	6.30	6.15	5.92	5.89	5.89	5.98	6.15	6.30	6.33	6.16	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Filter Plant Effluent	7.75	7.77	7.82	7.85	7.80	7.81	7.75	7.80	7.81	7.78	7.81	7.82	7.80	
Distribution System	7.15	6.95	7.33	7.09	6.99	7.04	6.83	7.07	7.51	7.11	7.39	7.44	7.16	
Total Alkalinity, mg/l														
Influent DeHart, as CaCO3	4.57	4.45	4.66	4.00	4.55	4.45	4.82	5.09	4.91	5.30	5.03	4.27	4.68	
Influent Susquehanna, as CaCO3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Filter Plant Effluent, as CaCO3	11.90	11.93	12.10	10.50	12.68	13.62	15.94	20.16	20.07	17.00	15.25	13.55	14.56	
Distribution System	10.70	10.30	10.70	10.60	11.40	11.20	13.90	16.90	18.10	15.00	14.20	11.70	12.89	
Temperature, C														
Influent from DeHart	6.15	5.48	6.53	7.65	12.50	15.53	17.75	19.16	20.03	17.21	12.54	7.67	12.35	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Filter Plant Effluent	5.67	4.94	5.64	7.10	12.01	14.43	15.84	17.56	19.01	16.68	11.72	6.68	11.44	
Distribution System	11.50	9.89	10.80	13.10	16.80	20.50	21.70	22.30	22.20	19.40	16.40	11.50	16.34	
Fluoride, mg/l														
Filter Plant Effluent	1.02	1.03	1.01	1.14	0.97	0.96	1.00	0.97	0.98	0.99	1.03	1.06	1.01	2.00
Aluminum, mg/l														
Filter Plant Effluent	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.20
Iron, mg/l														
Influent from DeHart	0.14	0.12	0.08	0.06	0.07	0.09	0.08	0.13	0.18	0.16	0.12	0.09	0.11	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Filter Plant Effluent	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.30
Distribution System	0.06	0.06	0.06	0.06	0.05	0.04	0.04	0.03	0.03	0.04	0.03	0.04	0.04	0.30
Total Dissolved Solids, mg/l														
Influent from DeHart	14.50	15.25	16.24	16.05	15.82	15.91	16.10	16.45	16.28	15.78	15.66	15.45	15.79	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Filter Plant Effluent	32.10	33.54	35.14	34.30	34.72	36.25	38.61	42.04	41.77	38.43	36.04	34.29	36.44	
Distribution System	33.10	34.10	35.90	35.00	35.40	36.90	38.60	42.30	43.40	39.30	37.00	35.10	37.18	
Total Hardness, mg/l														
Influent from DeHart	7.79	8.00	8.27	8.00	7.74	7.68	7.51	7.80	7.91	7.95	7.63	7.54	7.82	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Filter Plant Effluent	13.80	14.32	14.90	15.50	14.33	15.32	16.40	19.58	19.00	16.34	14.99	14.45	15.74	
Distribution System	13.50	14.80	15.70	15.10	14.50	16.10	17.00	20.40	19.80	16.80	15.70	15.10	16.21	
Orthophosphate, mg/l														
Filter Plant Effluent	1.32	1.32	1.22	1.31	1.32	1.27	1.27	1.27	1.28	1.23	1.30	1.32	1.29	
Distribution System	1.25	1.25	1.22	1.28	1.25	1.23	1.23	1.25	1.22	1.25	1.27	1.27	1.25	
*Total Trihalomethanes, mg/l														
Distribution System	0.01	NA	NA	0.02	NA	NA	0.04	NA	NA	0.03	NA	NA	0.03	0.08
*Total Haloacetic Acids, mg/l														
Distribution System	0.01	NA	NA	0.03	NA	NA	0.03	NA	NA	0.01	NA	NA	0.02	0.06
Total Organic Carbon, mg/l														
Influent from DeHart	1.50	NA	NA	1.50	NA	NA	1.30	NA	NA	1.30	NA	NA	1.40	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N/A	
Filter Plant Effluent	1.00	NA	NA	1.00	NA	NA	0.09	NA	NA	1.10	NA	NA	0.80	
Average Filter Run, Hours	79.60	80.24	79.36	80.00	80.14	80.14	80.00	80.02	80.00	80.00	80.00	80.00	79.96	

Note: Total Hardness = Calcium Hardness + Magnesium Hardness, mg/l as CaCO3

* Running Annual Quarterly Average

EXHIBIT B

Flow Monitoring and Water Withdrawal Information 2008

Month	DeHart Total (MG)	DeHart Average (MGD)	River Total (MG)	River Average (MGD)	* U.W.P.A. Interconnect (MG)	Total Water Withdrawn (MG)	Total Water Withdrawn Avg. (MGD)	Finished Water (MG)	Finished Water (MGD)	Ten Year Average (MGD)	Process Water (MG)	Waste to Sewer (MG)
January	260.41	8.40	0.00	0.00	0.00	260.41	8.40	251.31	8.11	9.12	2.58	5.13
February	250.26	8.63	0.00	0.00	0.00	250.26	8.63	241.70	8.33	9.16	2.41	4.79
March	260.99	8.42	0.00	0.00	0.00	260.99	8.42	252.61	8.15	8.94	2.58	5.18
April	248.91	8.30	0.00	0.00	0.00	248.91	8.30	240.04	8.00	8.64	2.64	4.93
May	254.01	8.19	0.00	0.00	0.00	254.01	8.19	242.75	7.83	9.08	2.72	13.73
June	267.15	8.91	0.00	0.00	0.00	267.15	8.91	259.93	8.66	9.30	4.25	5.42
July	268.24	8.65	0.00	0.00	0.00	268.24	8.65	262.40	8.46	9.49	5.02	5.40
August	271.43	8.76	0.00	0.00	0.00	271.43	8.76	264.58	8.53	9.55	5.07	5.43
September	258.40	8.61	0.00	0.00	0.00	258.40	8.61	252.41	8.41	9.21	4.56	5.29
October	250.09	8.07	0.00	0.00	0.00	250.09	8.07	235.01	7.58	8.73	3.66	6.02
November	233.39	7.78	0.00	0.00	0.00	233.39	7.78	226.03	7.53	8.52	2.75	5.29
December	239.82	7.74	0.00	0.00	0.00	239.82	7.74	234.00	7.55	8.51	2.72	5.48
Total	3,063.10	100.45	0.00	0.00	0.00	3,063.10	100.45	2,962.77	97.16	108.25	40.96	72.09
Average	255.26	8.37	0.00	0.00	0.00	255.26	8.37	246.90	8.10	9.02	3.41	6.01

* U.W.P.A. Denotes United Water Pennsylvania

Peak Day Water Use for Report Month (MGD) 8.70 on 12/10/08
Minimum Day Water Use for Report Month (MGD) 7.39 on 12/5/08

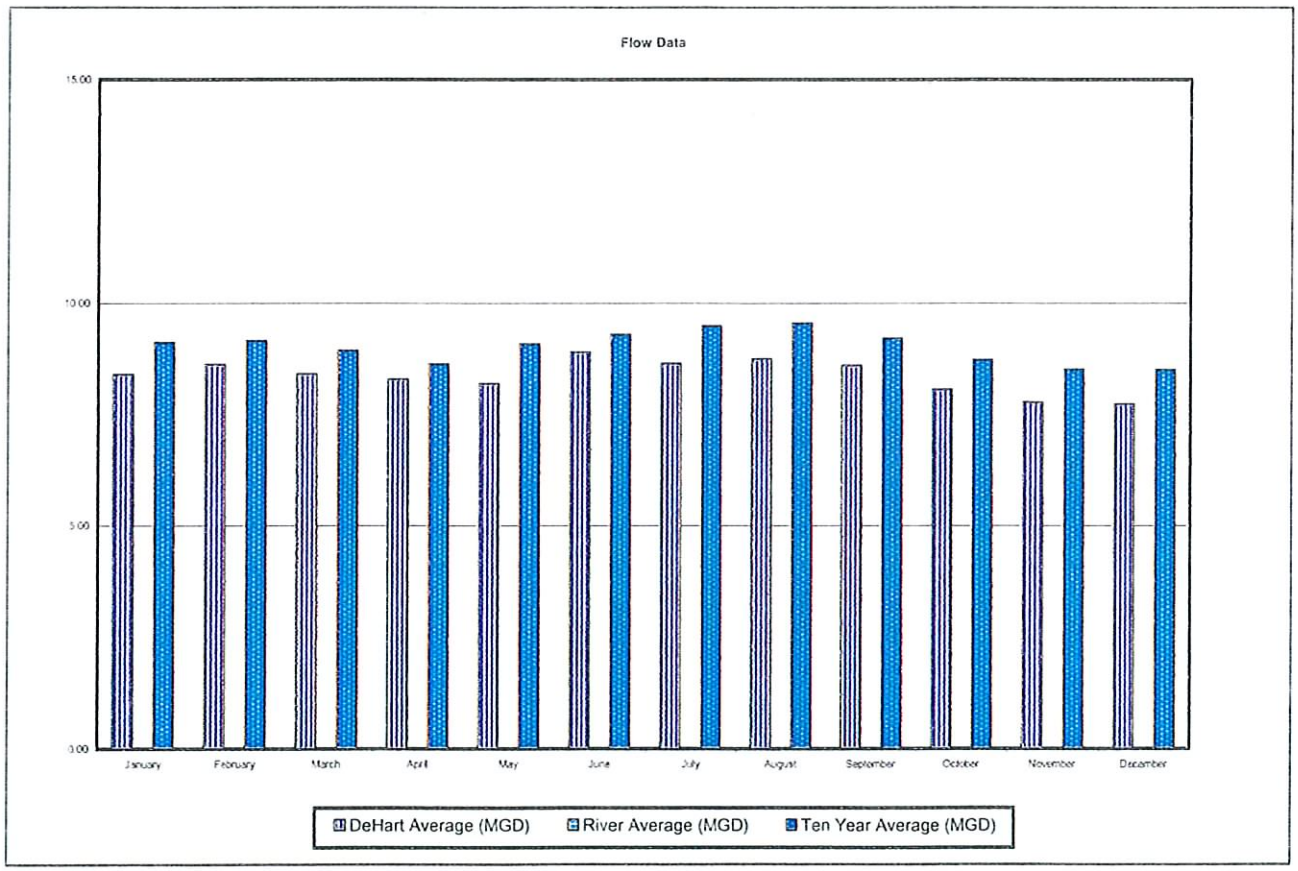


EXHIBIT C

Rainfall at the DeHart Reservoir - 2008

Date	January	February	March	April	May	June	July	August	September	October	November	December	Annual Total
2008 Total	1.65	6.21	5.21	3.74	5.74	2.5	4.49	2.8	5.93	3.85	2.21	7.07	51.40
Daily Average	0.053	0.214	0.168	0.124	0.185	0.083	0.144	0.090	0.197	0.124	0.073	0.228	0.14
Ten Year Average	4.05	2.83	3.8	4.89	3.48	6.21	4.07	4.11	6.29	4.45	3.25	3.46	50.89
2007 Total	2.55	3.1	3.69	4.02	0.81	4.34	3.95	5.03	2.99	5.89	3.82	3.88	44.065

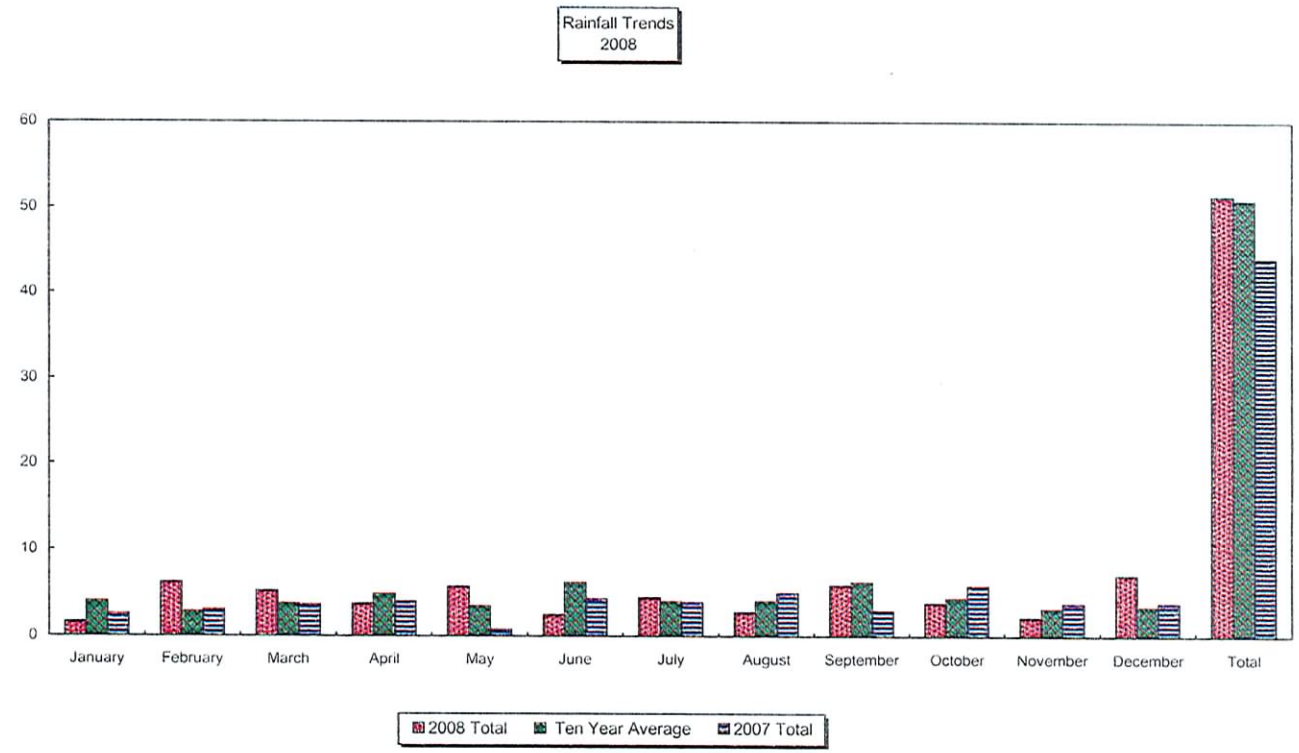


EXHIBIT D

Water Level at the DeHart Reservoir - 2008

Date	January	February	March	April	May	June	July	August	September	October	November	December
2008 AVG	-101.74	-54.96	2.3	2.1	3.3	-2.1	-19.8	-44.32	-70.63	-94.16	-106.4	-73.2
Ten Year AVG	-72.023	-59.268	-46.538	-30.077	-26.977	-28.993	-39.375	-54.93	-72.474	-83.008	-90.254	-84.797
2007 AVG	3.19	-0.46	2.45	4.43	0.1	-11.97	-33.35	-57.38	-84.83	-111.23	-128.2	-130.2

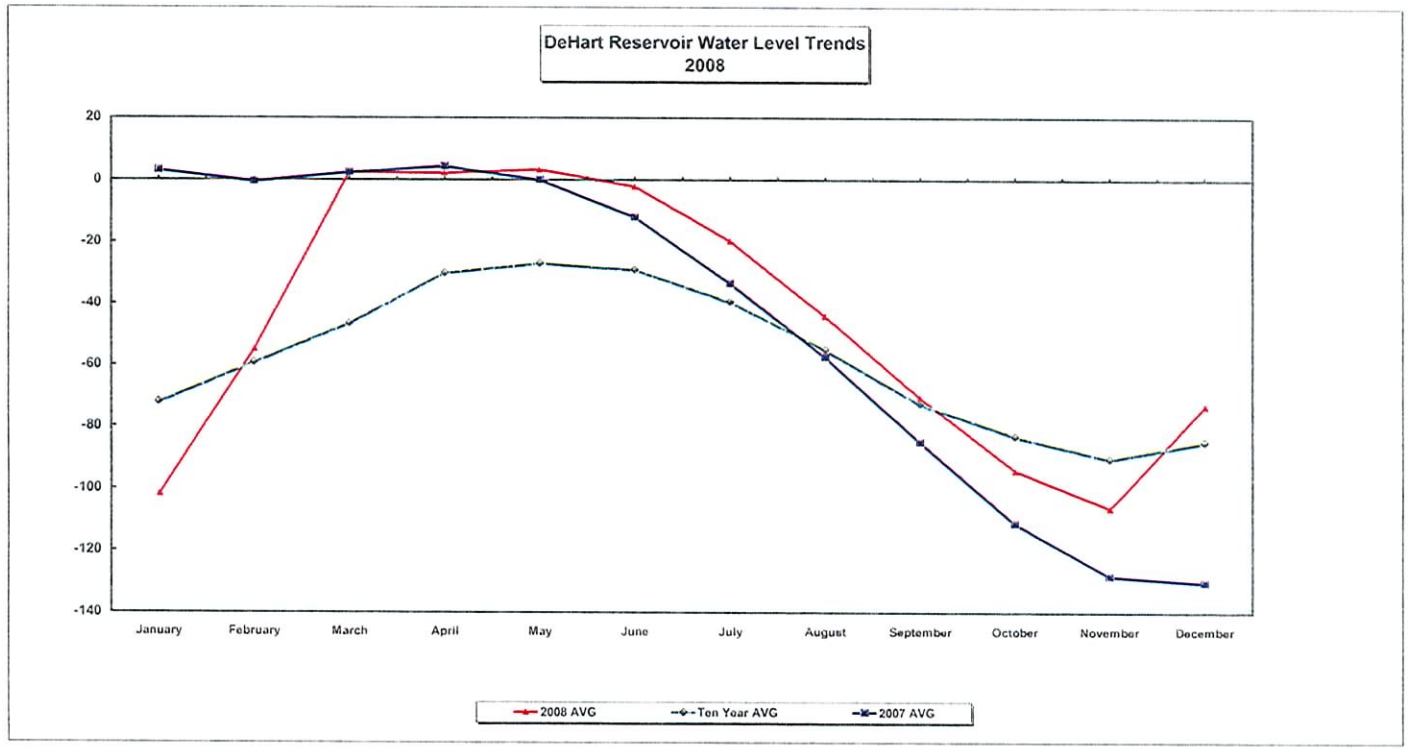


EXHIBIT E

Maintenance of Minimum Daily Conservation Release - 2008

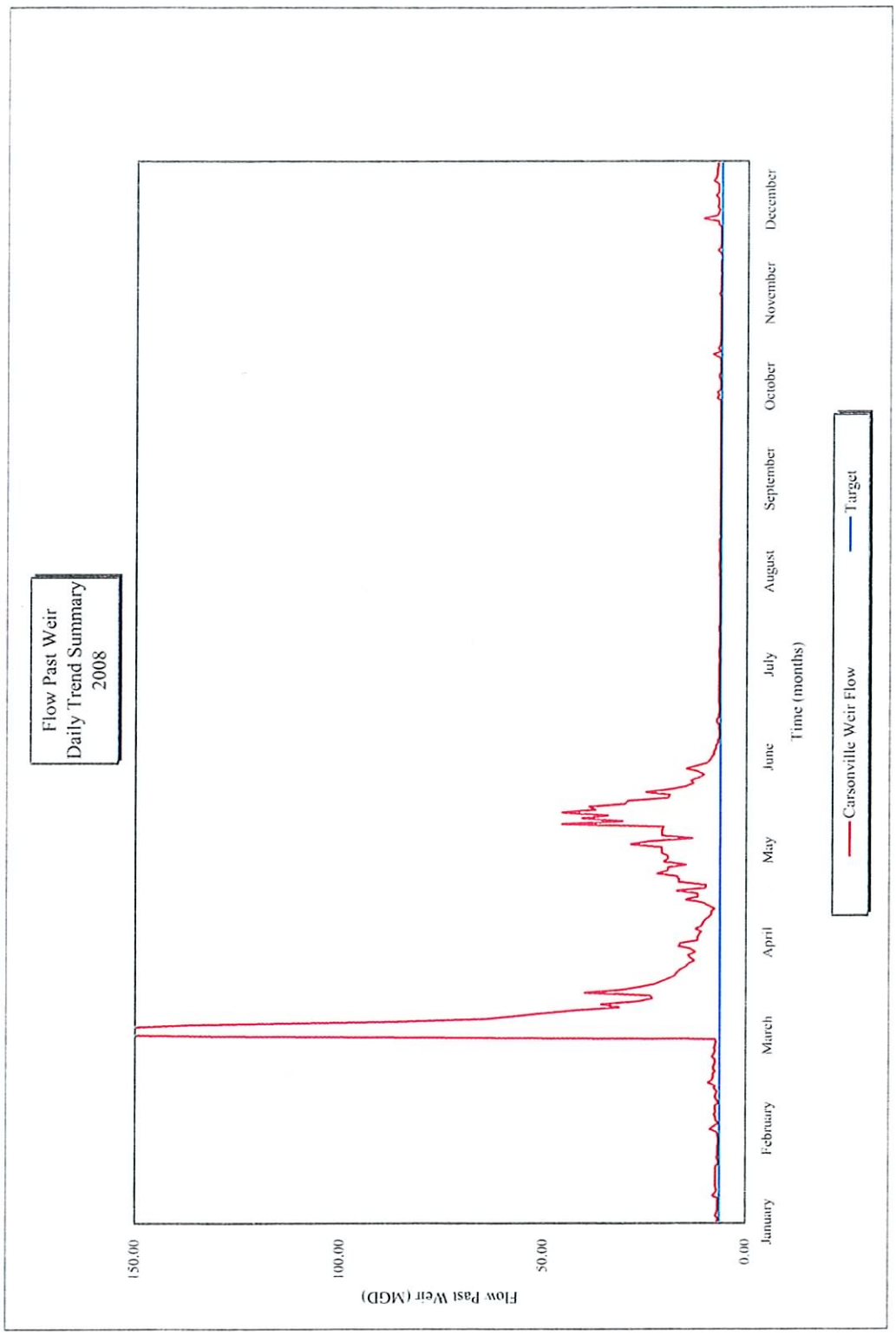


EXHIBIT F

Utility Usage - 2008

Location / Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Dr. Robert E. Young Water Services Center														
Electric														
Total, kwH	244,800	167,400	205,200	187,200	171,000	199,800	176,400	171,000	199,800	171,000	194,400	189,000	189,750	2,277,000
Average, kwH/Day	7,897	5,772	6,619	6,240	5,516	6,660	5,690	5,516	6,660	5,516	6,480	6,097	6,222	
Cost, Dollars	$15,315.91	$11,951.02	$14,461.49	$13,706.64	$11,546.78	$13,576.42	$11,427.59	$11,495.05	$14,048.56	$11,229.52	$12,623.66	$12,376.62	$12,813.27	$153,759.26
Natural Gas														
Total, Cu Ft	1,354,200	1,333,400	2,654,100	1,000,800	522,300	355,700	266,300	165,800	102,400	83,100	231,000	767,200	736,358	8,836,300
Average, Cu Ft/Day	43,684	47,621	85,616	33,360	16,848	11,857	8,590	5,348	3,413	2,770	7,700	25,573	24,365	
Cost, Dollars	$22,084.05	$19,753.78	$16,873.30	$15,651.07	$6,982.46	$5,498.45	$4,091.88	$2,741.52	$1,739.57	$966.51	$2,822.44	$9,927.15	$9,094.35	$109,132.18
Potable Water														
Total, Gal	4,100	5,100	3,800	6,500	9,700	335,700	499,300	443,700	280,400	25,600	3,500	3,400	135,067	1,620,800
Average, Gal/Day	132	182	123	217	313	11,190	16,106	14,313	9,347	826	117	110	4,415	
Cost, Dollars	$20.80	$22.50	$16.77	$28.68	$42.80	$1,481.11	$2,202.91	$1,957.60	$1,237.12	$112.95	$15.44	$15.00	$596.14	$7,153.68
Reservoir Park Pump Station														
Electric														
Total, kwH	No Bill	109,200	108,400	No Bill	103,200	104,800	102,400	100,000	111,200	105,200	110,000	102,400	105,680	1,056,800
Average, kwH/Day		3,766	3,497		3,329	3,493	3,303	3,226	3,707	3,394	3,667	3,303	3,468	
Cost, Dollars		$5,998.32	$5,805.77		$5,527.02	$5,607.81	$8,303.81	$5,365.42	$8,925.05	$5,628.01	$5,870.39	$5,486.61	$6,251.82	$62,518.21
Natural Gas														
Total, Cu Ft	44,200	53,800	59,000	40,200	12,700	3,900	0	0	0	500	20,700	35,000	22,500	270,000
Average, Cu Ft/Day	1,426	1,855	1,903	1,340	410	130	0	0	0	16	690	1,129	742	
Cost, Dollars	$490.01	$595.31	$840.74	$781.49	$363.58	$55.64	$3.21	$3.21	$3.21	$8.28	$223.22	$377.54	$312.12	$3,745.44
Potable Water														
Total, Gal	141	95	118	136	155	127	214	123	152	106	68	90	127	1,525
Average, Gal/Day	5	3	4	5	5	4	7	4	5	3	2	3	4	
Cost, Dollars	$0.72	$0.42	$0.52	$0.60	$0.68	$0.56	$0.94	$0.54	$0.67	$0.47	$0.30	$0.40	$0.57	$6.82
Susquehanna River Pump Station														
Electric														
Total, kwH	1,800	1,800	1,200	No Bill	1,200	1,200	1,200	1,200	1,200	1,200	1,800	1,200	1,364	13,200
Average, kwH/Day	58	62	39		39	40	39	39	40	39	60	39	45	
Cost, Dollars	$199.66	$223.65	$133.28		$133.28	$133.28	$133.28	$133.28	$133.28	$133.28	$181.93	$133.28	$151.95	$1,471.82
Natural Gas														
Total, Cu Ft	51,700	48,900	56,100	29,600	8,100	2,800	0	0	0	0	1,100	4,600	16,908	202,900
Average, Cu Ft/Day	1,668	1,686	1,810	987	261	93	0	0	0	0	37	148	557	
Cost, Dollars	$795.88	$905.90	$620.54	$688.16	$503.15	$102.25	$3.21	$3.21	$3.21	$3.21	$3.21	$51.95	$306.99	$3,683.88
Potable Water														
Total, Gal	300	300	300	300	200	200	400	200	100	300	100	200	242	2,900
Average, Gal/Day	10	11	10	10	6	7	13	6	3	10	3	6	8	
Cost, Dollars	$1.52	$1.32	$1.32	$1.32	$0.88	$0.88	$1.76	$0.88	$0.44	$1.32	$0.44	$0.88	$1.08	$12.99
Union Square Booster Station														
Electric														
Total, kwH	4,684	5,986	3,232	No Bill	5,791	1,593	775	301	302	313	322	979	2,207	24,278
Average, kwH/Day	151	206	104		187	53	25	10	10	10	11	32	73	
Cost,Dollars	$557.43	$663.72	$348.37		$678.10	$179.54	$98.83	$45.39	$45.50	$46.76	$47.80	$122.59	$257.64	$2,834.03
DeHart Facilities														
Electric														
Total, kwH	5,311	5,143	5,281	5,571	5,135	4,153	4,508	3,982	3852	3,494	4,060	5,390	4,657	55,880
Average, kwH/Day	171	177	170	186	166	138	145	128	128	113	135	174	153	
Cost, Dollars	$543.84	$532.00	$542.20	$577.55	$537.44	$441.22	$474.44	$425.05	$414.65	$382.76	$432.69	$551.04	$487.91	$5,854.88
Fuel Oil														
Total, Gals.	1200	2093	1750	1200	700	400	200	200	200	400	700	1,235	857	10,278
Average, Gals/Day	39	72	56	40	39	13	7	7	7	13	39	40	31	
Cost, Dollars	$3,336.00	$5,819.00	$4,865.00	$3,336.00	$2,632.00	$1,504.00	$752.00	$752.00	$752.00	$1,504.00	$2,632.00	$2,087.15	$2,497.60	$29,971.15
City Island Heat Trace														
Electric														
Total, kwH	6,073	2,178	311	No Bill	310	193	206	183	173	196	170	3,342	1,212	13,335
Average, kwH/Day	196	75	10		10	6	7	6	6	6	6	108	40	
Cost, Dollars	$574.64	$243.62	$46.54		$46.42	$33.03	$34.49	$31.88	$30.74	$33.37	$30.39	$335.71	$130.98	$1,440.83
Expenditures YTD	**$43,920.46**	**$46,710.56**	**$44,555.84**	**$34,771.51**	**$28,994.59**	**$28,614.19**	**$27,528.36**	**$22,955.04**	**$27,334.01**	**$20,050.44**	**$24,883.91**	**$31,465.92**	**$31,815.40**	**$381,784.84**

Exhibit G

Hydro-Turbine Generator Performance 2008

Month	Kilowatt-hour (KWH)	Anticipated Savings *
January	47,181	$3,569
February	82,006	$6,203
March	65,038	$4,919
April	80,489	$6,088
May	72,440	$5,479
June	84,147	$6,365
July	108,490	$8,206
August	71,563	$5,413
September	85,054	$6,433
October	67,868	$5,134
November	64,573	$4,884
December	72,834	$5,509
Average	**75,140**	**$5,684**
Year to Date	**901,683**	**$68,203**

* Anticipated savings calculated by multiplying the KWH by the average electrical rate of $0.07564

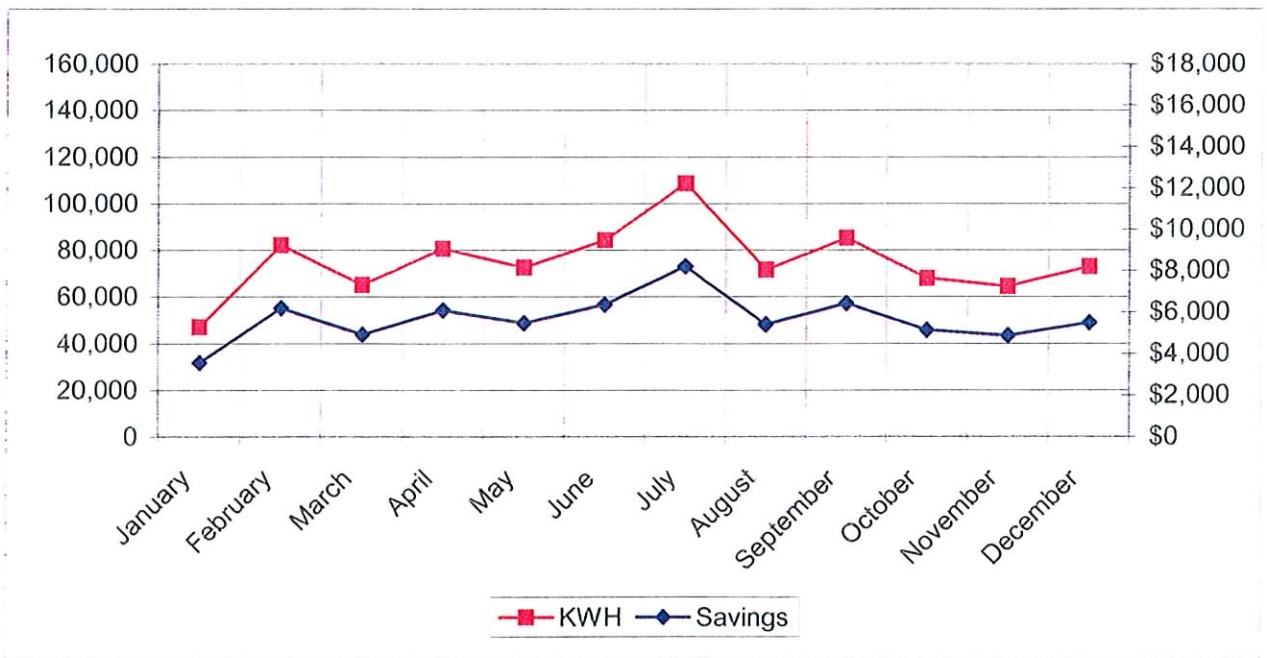


EXHIBIT H

Treatment Chemical Usage - 2008

Chemical	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Chlorine														
Total, Lbs.	4,960	4,525	4,705	4,720	4,980	5,180	10,030	6,260	5,200	4,840	4,450	4,480	5,361	64,330
Average, Lbs./Day	160	156	152	157	161	173	324	202	173	156	148	145	175.5	
Dose, mg/l	2.3	2.2	2.2	2.3	2.4	2.3	4.5	2.8	2.4	2.3	2.3	2.2	2.5	
Cost, $/Lbs.	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	$0.36	
Total Cost, Dollars	$1,802.96	$1,644.84	$1,710.27	$1,715.72	$1,810.23	$1,882.93	$3,645.91	$2,275.51	$1,890.20	$1,759.34	$1,617.58	$1,628.48	$1,948.66	$23,383.96
Alum														
Total 50 wt.% Al2SO4 *14.3 H20	5,029	5,133	5,303	4,554	4,786	5,276	4,853	4,699	4,530	4,511	4,051	4,292	4,751	57,017
Avg Alum, Gals./Day	162	177	171	152	154	176	157	152	151	146	135	138	155.9	
Alum, mg/l	12.4	13.2	13.1	11.8	12.1	12.7	11.7	11.2	11.3	11.6	11.2	11.5	12.0	
Alum Cost, $/Gal.	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	
Alum Total Cost, Dollars	$3,371.39	$3,441.12	$3,555.08	$3,052.96	$3,208.49	$3,536.98	$3,253.41	$3,150.17	$3,036.87	$3,024.13	$2,715.75	$2,877.32	$3,185.31	$38,223.67
Lime														
Total Ca(OH)2, Lbs.	9,233	9,424	9,736	8,361	8,787	9,686	8,909	9,201	8,870	8,833	7,932	8,404	8,948	107,376
Average Lime, Lbs./Day	298	325	314	279	283	323	287	297	296	285	264	271	293.5	
Lime Dose, mg/l	4.3	4.5	4.5	4.0	4.1	4.3	4.0	4.1	4.1	4.2	4.1	4.2	4.2	
Lime Cost, $/Lbs.	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	
Lime Total Cost, Dollars	$761.72	$777.48	$803.22	$689.78	$724.93	$799.10	$734.99	$759.08	$731.78	$728.72	$654.39	$693.33	$738.21	$8,858.52
Soda Ash														
Total Na2CO3, Lbs.	18,000	16,200	16,500	15,600	16,800	16,500	19,200	18,300	22,200	22,800	21,900	20,700	18,725	224,700
Avg Soda Ash, Lbs./Day	581	559	532	520	542	550	619	590	740	735	730	668	613.9	
Soda Ash Dose, mg/l	8.3	7.8	7.6	7.5	7.9	7.4	8.6	8.1	10.3	10.9	11.3	10.3	8.8	
Soda Ash Cost, $/Lbs.	$0.19	$0.19	$0.19	$0.19	$0.19	$0.19	$0.19	$0.19	$0.19	$0.19	$0.19	$0.19	$0.19	
Soda Ash Total Cost, Dollars	$3,501.00	$3,150.90	$3,209.25	$3,034.20	$3,267.60	$3,209.25	$3,734.40	$3,559.35	$4,317.90	$4,434.60	$4,259.55	$4,026.15	$3,642.01	$43,704.15
Fluoride														
Total 59.8 wt. % Na2SiF6 Lbs	2,825	2,810	2,950	2,710	2,745	3,065	3,120	3,145	3,285	2,755	2,705	2,570	2,890	34,685
Average, Fluoride Lbs./Day	91	97	95	90	89	102	101	101	110	89	90	83	94.8	
Fluoride (F-) Dose, mg/l	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	
Fluoride Cost, $/Lbs.	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	$0.58	
Fluoride Total Cost, Dollars	$1,624.38	$1,615.75	$1,696.25	$1,558.25	$1,578.38	$1,762.38	$1,794.00	$1,808.38	$1,888.88	$1,584.13	$1,555.38	$1,477.75	$1,661.99	$19,943.88
Sodium Hydroxide														
Total 50 wt.% NaOH Gals	483	466	603	441	584	733	765	1,187	936	622	300	154	606	7,274
Avg NaOH, Gals./Day	16	16	19	15	19	24	25	38	31	20	10	5	19.9	
NaOH, mg/l	1.4	1.4	1.8	1.4	1.8	2.1	2.2	3.3	2.8	1.9	1.0	0.5	1.8	
NaOH 50 wt. %Cost, $/Gal.	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	
NaOH Total Cost, Dollars	$1,753.42	$1,691.71	$2,189.06	$1,600.95	$2,120.08	$2,660.99	$2,777.16	$4,309.14	$3,397.94	$2,258.03	$1,089.08	$559.06	$2,200.55	$26,406.63
Zinc Orthophosphate														
Total Zn3(PO4)2, Lbs.	7,641	7,261	7,677	8,215	8,321	9,008	9,737	10,313	9,219	8,488	8,627	8,880	8,616	103,387
Avg Zn3(PO4)2, Lbs./Day	246	250	248	274	268	300	314	333	307	274	288	286	282.4	
Zn3(PO4)2 Dose, mg/l	3.5	3.5	3.5	4.0	3.9	4.0	4.4	4.6	4.3	4.1	4.4	4.4	4.0	
Zn3(PO4)2 Cost, $/Lbs.	$0.39	$0.39	$0.39	$0.39	$0.39	$0.39	$0.39	$0.39	$0.39	$0.39	$0.39	$0.39	$0.39	
Zn3(PO4)2 Total Cost, Dollars	$2,995.27	$2,846.31	$3,009.38	$3,220.28	$3,261.83	$3,531.14	$3,816.90	$4,042.70	$3,613.85	$3,327.30	$3,381.78	$3,480.96	$3,377.31	$40,527.70
Potassium Permanganate														
Total KMnO4, Lbs.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg KMnO4, Lbs./Day	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
KMnO4 Dose, mg/l	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
KMnO4 Cost, $/Lbs.	$2.24	$2.24	$2.24	$2.24	$2.24	$2.24	$2.24	$2.24	$2.24	$2.24	$2.24	$2.24	$2.24	
KMnO4 Total Cost, Dollars	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Expenditures YTD	**$15,810.15**	**$15,168.10**	**$16,172.51**	**$14,872.14**	**$15,971.54**	**$17,382.76**	**$19,756.77**	**$19,904.32**	**$18,877.41**	**$17,116.25**	**$15,273.51**	**$14,743.05**	**$16,754.04**	**$201,048.51**
Average Flow Withdrawn (MGD)	8.40	8.63	8.42	8.30	8.19	8.91	8.65	8.76	8.61	8.07	7.78	7.74	100.45	

EXHIBIT I

DISTRIBUTION DIVISION ACTIVITIES 2008

Activity	January	February	March	April	May	June	July	August	September	October	November	December	Annual Total	Average
Water Shutoffs - vacant building leaking	25	8	7	4	1	2	7	2	4	4	1	4	69	5.8
Water Shutoffs - leaking services	2	3	2	3	1	3	0	1	4	2	11	1	33	2.8
Water Shutoffs - shut off program	5	16	16	456	156	173	270	152	112	125	128	40	1649	137.4
Water Shutoffs - vacant coded program	5	5	8	5	1	0	3	4	2	4	5	7	49	4.1
Water Restorations	35	17	17	96	97	102	102	85	75	72	107	69	874	72.8
Water tap - removed	0	0	3	2	3	12	2	1	3	1	2	0	29	2.4
Water tap - cleaned	5	1	2	3	2	2	2	1	2	2	2	0	24	2.0
Water tap - installed	3	5	2	0	3	2	6	3	2	3	4	1	34	2.8
Hydrant flow tests	0	2	10	1	2	2	3	0	2	6	2	5	35	2.9
Hydrants - replaced	0	0	0	0	1	0	0	0	2	4	0	0	7	0.6
Hydrants - repaired	23	3	13	2	1	0	3	16	0	4	2	3	70	5.8
Reported leak investigations	8	12	40	45	40	16	20	0	8	42	51	48	330	27.5
Leak notices served	5	4	5	1	2	2	3	3	2	2	1	2	32	2.7
Final leak notices served	3	2	3	2	2	2	2	4	2	2	0	3	27	2.3
Main breaks - repaired	5	4	3	1	0	2	0	1	0	1	2	6	25	2.1
Valve box repairs	0	2	1	0	1	2	4	0	2	2	1	0	15	1.3
Valves - replaced	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Valves - repaired	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1
Valves - exercised	12	20	12	1	4	4	0	4	8	0	8	0	73	6.1
Locates completed	714	486	689	948	926	846	997	770	840	824	427	641	9108	759.0
Water Complaint Calls	3	0	0	4	0	1	1	3	3	0	1	1	17	1.4

EXHIBIT J

Metering Activities 2008

Activity	January	February	March	April	May	June	July	August	September	October	November	December	Annual Total	Average
Ready-to-serve accounts	20990	20991	20989	20989	20991	20992	20988	20988	20990	20987	20988	20981	251864	20988.7
Water usage accounts	20773	20775	20792	20776	20782	20783	20779	20777	20779	20779	20781	20777	249353	20779.4
Non-compliant meters	549	545	538	534	532	533	524	523	520	517	509	508	6332	527.7
Meter readings - attempted	22680	22695	22795	22714	22789	22659	22749	22760	22792	22841	22990	23150	273614	22801.2
Meter readings - obtained	21287	21302	21569	21342	21549	21298	21325	21369	21560	21680	21966	22358	258605	21550.4
Meters - missing	6	4	4	12	8	12	18	10	12	6	8	13	113	9.4
Leaking meters - replaced	13	11	10	2	1	11	9	2	4	7	1	7	78	6.5
Non-registering meters - replaced	11	18	16	7	1	11	9	8	12	8	5	3	109	9.1
Remote meters - repaired	90	87	42	58	34	23	49	24	32	40	51	119	649	54.1
Calibrated meters	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1
New service meters- installs	0	3	2	0	2	0	0	3	0	0	3	0	13	1.1

EXHIBIT K

Miscellaneous Water Usage (gals) 2008

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
Main Leaks	2,971,256	1,937,053	158,289	66,847	0	75,963	0	23,220	0	227,889	246,689	265,490	5,972,696	497,725
Service Leaks	453,600	1,455,136	340,200	160,070	0	17,741	12,128	70,963	2,155,680	1,901	382,320	39,917	5,089,656	424,138
Fires	29,011	5,075	6,200	13,050	1,100	7,400	34,402	24,750	24,750	4,318	8,305	6,400	164,761	13,730
Street Sweepers	0	63,740	68,000	72,400	77,320	62,380	74,420	72,340	68,200	64,280	66,800	60,200	750,080	62,507
AWTF unmetered	2,000	14,900	7,900	8,700	7,500	3,500	9,300	5,200	3,300	4,400	0	2,000	68,700	5,725
Special Events	0	0	0	0	14,000	0	0	0	0	0	0	0	14,000	1,167
Lab and Instr. taps	523,567	575,823	568,434	464,081	462,497	675,413	558,457	532,020	445,917	636,493	703,362	465,922	6,611,986	550,999
High Resvr Leakage	372,569	297,857	342,715	213,313	176,892	215,765	273,629	391,470	397,204	445,694	186,343	118,235	3,431,686	285,974
Bulk Water	32,700	14,800	6,400	338,305	1,061,100	1,354,380	776,800	256,600	355,200	206,800	109,300	1,900	4,514,285	376,190
Flushing	0	0	0	1,500	0	0	0	2,689	0	0	3,000	0	7,189	599
Flow Tests	0	0	5,000	2,000	0	3,500	2,000	0	0	3,000	1,000	1,500	18,000	1,500
Hydrant connections	0	0	0	0	4,000	1,181,000	20,000	0	20,000	4,000	0	2,000	1,231,000	102,583
Total	**4,384,703**	**4,364,384**	**1,503,138**	**1,340,266**	**1,804,409**	**3,597,042**	**1,761,136**	**1,379,252**	**3,470,251**	**1,598,775**	**1,707,119**	**963,564**	**27,874,039**	**193,570**

EXHIBIT L

Revenue Report For The Year Ending December 31, 2008

Account Description	Adjusted Budget	December Revenue	Year to Date Revenue	Budget Balance
Interest - Savings Account	$15,000.00	$1,002.34	$7,008.27	$7,991.73
Interest - Other	$20.00	$0.65	$5.90	$14.10
Total Interest Income	**$15,020.00**	**$1,002.99**	**$7,014.17**	**$8,005.83**
Metered/Unmetered Water Sales	$600,000.00	$42,037.10	$270,579.65	$329,420.35
Ready to Serve	$70,000.00	$6,338.23	$58,579.22	$11,420.78
Metered Water Sales	$10,700,000.00	$1,043,626.55	$11,152,928.65	-$452,928.65
Mtrd Wat Ready to Serve	$4,220,000.00	$417,542.52	$4,270,462.53	-$50,462.53
Meter Sales Revenue	$350.00	$0.00	$0.00	$350.00
Sale of Water Parts	$20.00	$50.00	$57.00	-$37.00
Water Conservation Device Sales	$0.00	$0.00	$0.00	$0.00
Fire Line Charges	$280,000.00	$585.32	$280,609.44	-$609.44
Other Hbg. Water Operational Revenue	$130,000.00	$10,053.59	$146,737.76	-$16,737.76
Water Tapping Fees	$32,000.00	$1,500.00	$11,875.00	$20,125.00
Water Service Initiation Fee	$2,200.00	$80.04	$480.04	$1,719.96
Water Restoration	$70,000.00	$8,452.89	$87,658.06	-$17,658.06
Water Termination Fee	$150.00	$25.00	$50.00	$100.00
Harrisburg Water Liens-Principal Revenue	$200,000.00	$19,815.66	$144,545.93	$55,454.07
Hbg. Water Liens-Interest Revenue	$40,000.00	$4,585.45	$34,345.32	$5,654.68
Total Hbg. Water Utility Fund	**$16,344,720.00**	**$1,554,692.35**	**$16,458,908.60**	**-$114,188.60**
Metered/Unmetered Susq. Water Sales	$1,568,000.00	$140,384.46	$1,501,345.11	$66,654.89
Susquehanna Ready to Serve	$443,000.00	$43,619.71	$444,083.20	-$1,083.20
Total Susquhanna Water Revenue	**$2,011,000.00**	**$184,004.17**	**$1,945,428.31**	**$65,571.69**
Refund of Expenditures	$7,000.00	$100.00	$2,150.00	$4,850.00
The HBG Authority	$0.00	$0.00	$32,006.80	-$32,006.80
Total Miscellaneous	**$7,000.00**	**$100.00**	**$34,156.80**	**-$27,156.80**
Total THA Water Utility Fund	**$18,377,740.00**	**$1,739,799.51**	**$18,445,507.88**	**-$67,767.88**

EXHIBIT M

Expenditure Report For The Year Ending December 31, 2008

Account Description	Adjusted Budget	December Expenditure	December Encumberance	Year to Date Expenditure	Budget Balance
Administration Division					
Salaries & Wages	$332,782.00	$22,806.64	$0.00	$288,373.09	$44,408.91
Fringe Benefits	$150,441.11	$22,547.94	$0.00	$107,086.04	$43,355.07
Communications	$47,000.00	$3,781.85	$0.00	$22,035.43	$24,964.57
Professional Fees	$44,486.74	$6,127.06	$0.00	$42,206.48	$2,280.26
Insurance	$115,773.12	$2,939.58	$0.00	$95,954.63	$19,818.49
Maintenance & Repairs	$68,937.84	$9,893.60	$0.00	$65,176.03	$3,761.81
Contracted Services	$4,145,901.33	$293,095.21	$0.00	$4,143,060.21	$2,841.12
Supplies & Expenses	$113,628.84	$15,519.12	$0.00	$102,317.09	$11,311.75
Payments Other Transfers - THA	$8,170,791.00	$0.00	$0.00	$0.00	$8,170,791.00
Equipment - Lease/Purchase	$143,368.07	-$25,840.00	$0.00	$117,528.07	$25,840.00
Total Administration Division	**$13,333,110.05**	**$350,871.00**	**$0.00**	**$4,983,737.07**	**$8,349,372.98**
Distribution/Metering Division					
Salaries & Wages	$525,772.61	$43,404.49	$0.00	$505,492.90	$20,279.71
Fringe Benefits	$194,785.92	$28,241.69	$0.00	$151,524.11	$43,261.81
Communications	$1,886.53	$58.69	$0.00	$1,486.53	$400.00
Rentals	$2,000.00	$0.00	$0.00	$0.00	$2,000.00
Maintenance & Repairs	$19,562.75	$466.28	$9,000.00	$18,531.30	$1,031.45
Contracted Services	$390,151.00	$0.00	$0.00	$388,674.00	$1,477.00
Supplies & Expenses	$147,710.12	$21,173.82	$0.00	$127,412.23	$20,297.89
Equipment - Lease/Purchase	$30,749.28	$0.00	$0.00	$30,749.28	$0.00
Capital Outlay	$190,925.72	$0.00	$0.00	$0.00	$190,925.72
Total Distribution/Metering Division	**$1,503,543.93**	**$93,344.97**	**$9,000.00**	**$1,223,870.35**	**$279,673.58**
Operations:					
Salaries & Wages	$807,939.56	$68,343.87	$0.00	$804,056.60	$3,882.96
Fringe Benefits	$298,611.51	$39,507.37	$0.00	$214,202.16	$84,409.35
Communications	$1,801.44	$205.29	$0.00	$971.62	$829.82
Professional Fees	$8,000.00	$1,340.00	$0.00	$4,673.83	$3,326.17
Utilities & Service	$699,771.31	$68,140.34	$0.00	$673,931.51	$25,839.80
Rentals	$500.00	$254.34	$0.00	$406.59	$93.41
Maintenance & Repairs	$48,720.00	$3,816.94	$9,000.00	$41,197.20	$7,522.80
Constracted Services	$990,040.00	$0.00	$0.00	$987,820.47	$2,219.53
Supplies & Expenses	$276,992.27	$34,673.07	$0.00	$254,640.15	$22,352.12
Equipment - Lease/Purchase	$372,874.00	$1,204.69	$0.00	$62,778.86	$310,095.14
Capital Outlay	$35,835.93	$0.00	$0.00	$0.00	$35,835.93
Total Operations/Maintenance Division	**$3,541,086.02**	**$217,485.91**	**$9,000.00**	**$3,044,678.99**	**$496,407.03**
Total Expenditure	**$18,377,740.00**	**$661,701.88**	**$18,000.00**	**$9,252,286.41**	**$9,125,453.59**

EXHIBIT N

Map of DeHart Reservoir Watershed

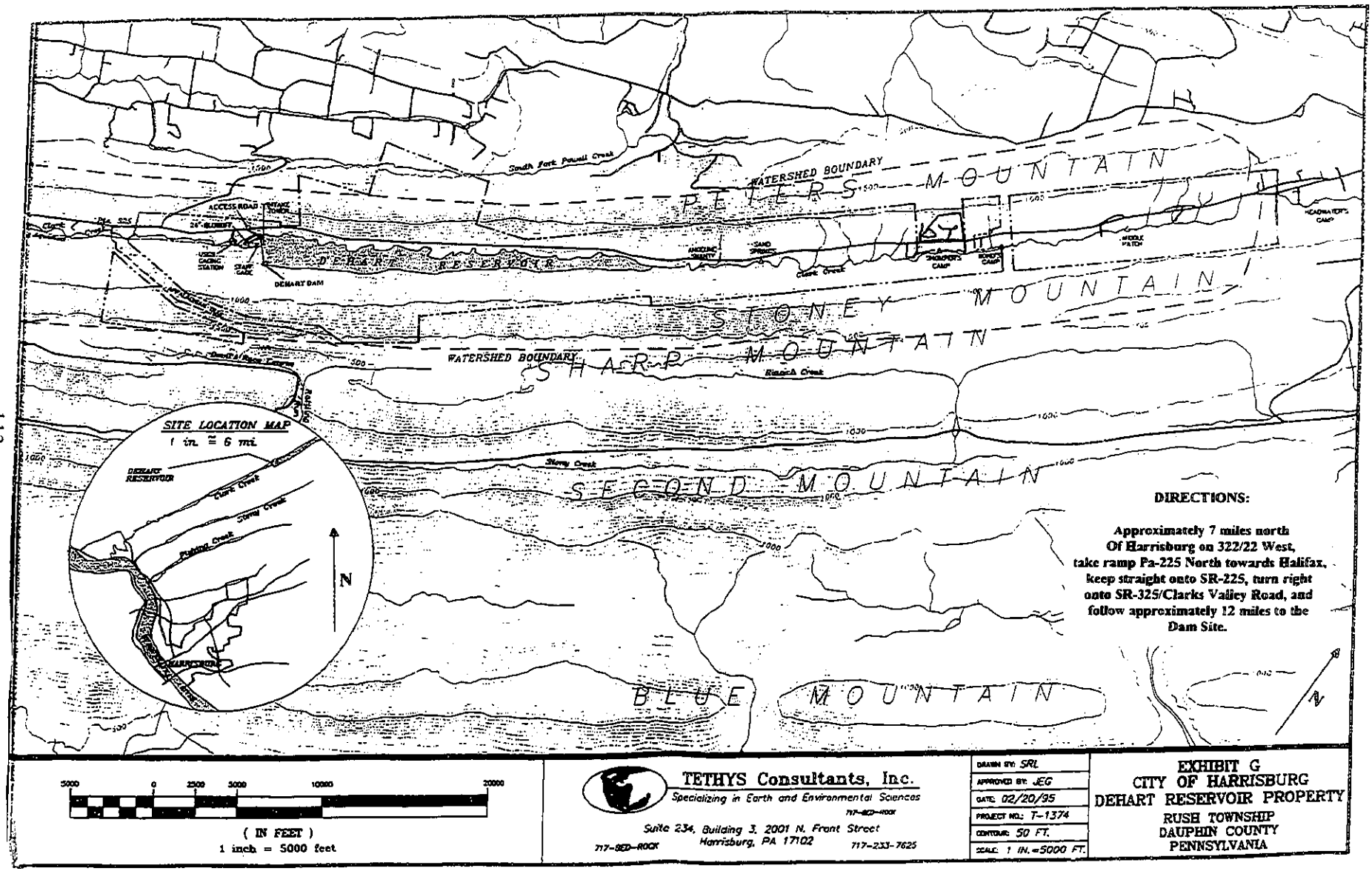


Exhibit O

CITY OF HARRISBURG
DEPARTMENT OF PUBLIC WORKS
BUREAU OF WATER
2008 Employee List

Management Staff

Name	Position	Employment Date
Bingaman, Chad E.	Director	07/25/94
Bey, Raly T. A.	Water Quality Administrator	06/27/94
Eisenberger II, David E.	Distribution Superintendent	02/23/87
Galbraith Jr., Daniel L.	Maintenance/DeHart Superintendent	03/20/95
Haney Jr., Irl G.	Operations Superintendent/ Watershed Manager	07/08/96

Bargaining Unit Employees

Name	Position	Employment Date
Baker, Joseph P.	Maintenance Specialist IV	03/03/76
Beshara, David A.	Operator IV	07/24/95
Beshara, Frederick D.	Service Person IV	06/08/92
Blake, David H.	Operator IV	07/03/00
Boone, Saundra L.	Secretary II	09/04/90
Brookmyer, Bryon N.	Maintenance Specialist IV	07/25/94
Carter, Juan M.	Service Person III	05/22/85
Cubilette, Luis F.	Operator IV	05/28/96
Decker, Conrad B.	Operator IV	08/22/94
Echevarria, Samuel	Laborer III	07/15/91
Gardner, Maynard	Service Person I	05/05/03
Heineman, Robert C.	Service Person IV	07/11/94
Landis, Chuck T.	Service Person IV	05/21/90
Lee, Kwan W.	Service Person III	02/14/85
Leeper, Michael J.	Operator III	04/05/88
Michaels, Sean B.	Laborer III	08/22/73
Miller, David P.	Meter Reader II	04/28/75
Morrow, Ronald A.	Operator IV	10/27/99
Rohrer Jr., James R.	Service Person IV	07/12/74
Russell, Brian J.	Operator IV	07/18/94
Santiago, Geraldo A.	Operator IV	02/18/92
Vugrinec, Robert J.	Electrician III	07/06/87
Weldon, Sue P.	Meter Reader II	05/11/82
Wilson, Robert L.	Maintenance Specialist III	05/23/83
Zatezalo, Samuel G.	Maintenance Specialist IV	04/06/76
Zurowski, JoAnn M.	Operator IV	03/28/88

EXHIBIT P

CITY OF HARRISBURG
BUREAU OF WATER

2008

ORGANIZATIONAL CHART

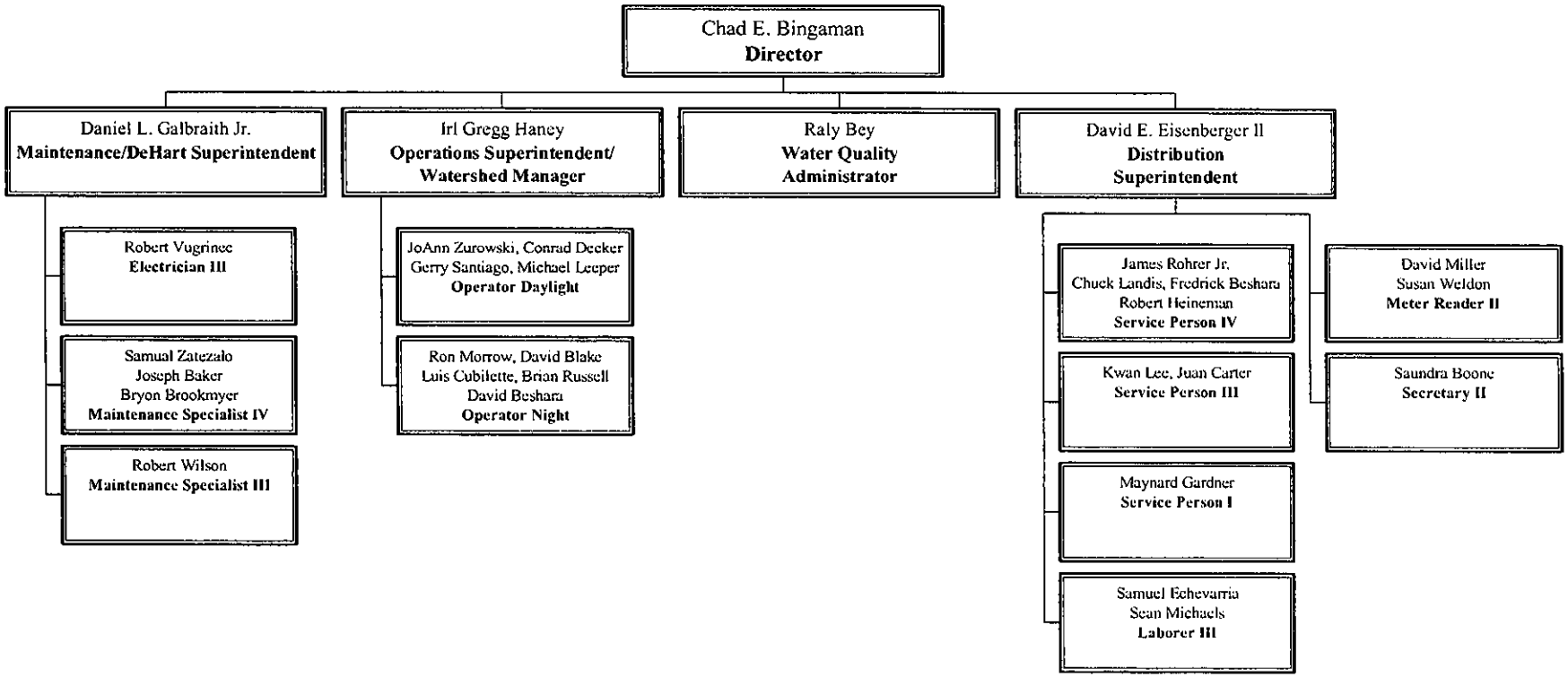


Exhibit Q

Authority Owned Facilities Utilized by Bureau of Water

Dr. Robert E. Young Water Services Center
Headquarters, Operations/Maintenance, Distribution, Laboratory
100 Pine Drive
Harrisburg, PA 17103-1260
(717) 238-8725
(717) 238-9168 Fax

William T. DeHart Dam and Reservoir
4927 Clarks Valley Rd.
Tower City, PA 17980
(717) 921-2881
(717) 921-2187 Fax

Reservoir Park Gatehouse
1901 Walnut Street
Harrisburg, PA 17103
(717) 234-1334

Union Square Booster Station
Union Square Industrial Park
Harrisburg, PA 17101
(717) 561-4212

River Pump Station
3015 N. Front Street
Harrisburg, PA 17110
(717) 234-8347

DeHart Residence #1
4931 Clarks Valley Rd.
Tower City, PA 17980

DeHart Residence #2
4929 Clarks Valley Rd.
Tower City, PA 17980